z/VM™

# Installation Guide

*Version 4 Release 3.0*

GC24-5992-02

z/VM™

# Installation Guide

*Version 4 Release 3.0*

GC24-5992-02

**Note!**
Before using this information and the product it supports, read the information in “Notices” on page 157.

**Third Edition (May 2002)**

This edition applies to the Version 4, Release 3, Modification 0 of IBM® z/VM (product number 5739-A03) and to all subsequent releases and modifications until otherwise indicated in new editions.

This edition replaces GC24-5992-01.

# Contents

# Preface

This book guides system programmers through the step-by-step installation procedures for installing z/VM.

The procedures allow installation of the z/VM system first-level on a processor or as a guest operating system hosted by z/VM. See the *z/VM: General Information* for a list of the processors supported by z/VM and the guest operating systems hosted by z/VM.

## Who Should Read This Book

This book is intended for system programmers responsible for installing z/VM.

System programmers are responsible for system operation and system management activities requiring a higher degree of computer skill and technical training and education than those covered by other system support personnel. They are ultimately responsible for the efficient functioning of the system.

## What You Should Know Before Reading This Book

This book assumes that you have a general idea of what z/VM does and that you understand the concept of a virtual machine. You should also have a general understanding of z/VM and S/390® data processing techniques.

This document includes all updates at the time of this publication (May 2002). Any updates to this document will be reflected in the document that is available at our website:

`http://www.ibm.com/eserver/zseries/zvm/`

## What This Book Contains

This book describes the step-by-step installation procedures for z/VM.

This book contains an Installation worksheet and Directory Build worksheet required for installation planning. This book also includes reference material and descriptions of the installation execs to be used while you install z/VM.

## Where to Find More Information

For more information about z/VM functions, see the books listed in the “Bibliography” on page 163.

## PDF Links to Other Books

The PDF version of this book provides links to other IBM books by file name. The name of the PDF file for an IBM book is unique and identifies the book and its edition. The book links provided in this book are for the editions (PDF file names) that were current when this PDF file was generated. Newer editions of some books (with different file names) may exist. A PDF link from this book to another book works only when a PDF file with the requested file name resides in the same directory as this book.

## How to Send Your Comments to IBM

Your feedback is important in helping us to provide the most accurate and high-quality information. If you have comments about this book or any other VM documentation, send your comments to us using one of the following methods. Be sure to include the name of the book, the publication number (including the suffix), and the page, section title, or topic you are commenting on.

- Visit the z/VM web site at:

  `http://www.ibm.com/eserver/zseries/zvm/`

There you will find the feedback page where you can enter and submit your comments.

- Send your comments by electronic mail to one of the following addresses:

  **Internet:** vmpub@us.ibm.com

  **IBMLink™:** GDLVME(PUBRCF)

- Fill out the Readers' Comments form at the back of this book and return it by mail, by fax (1–607–752–2327), or by giving it to an IBM representative. If the form is missing, you can mail your comments to the following address:

  IBM Corporation
  Information Development
  Department G60G
  1701 North Street
  Endicott, New York 13760-5553
  USA

# Summary of Changes

This section describes the technical changes made in this edition of the book and in previous editions. This edition may also include minor corrections and editorial changes.

## Third Edition for z/VM Version 4 (May 2002)

This edition contains updates for the General Availability of z/VM 4.3.0.

- TCP/IP configuration wizard support

  After z/VM is installed, you can use the IPWIZARD command to create a minimal TCP/IP configuration that establishes basic connectivity to your IP network. The command displays a panel requesting network information. After you fill out the panel, the information is processed and the TCP/IP SYSTEM DTCPARMS, TCPIP DATA, and PROFILE TCPIP files are created.
- 3590 tape drive is now supported for installation.
- Non-XF 3480 tape drive is no longer supported for installation.
- 4mm cartridge is no longer supported.
- 3380 DASD is no longer supported for installation.
- Mixed DASD support is no longer supported. All 3390 DASD used for installation must be the same model.
- TSAF and AVS are now part of the BASE installation.
- RACF® is preinstalled on z/VM, but it is disabled.

## Second Edition for z/VM Version 4 (October 2001)

This edition contains updates for the General Availability of z/VM 4.2.0.

## First Edition for z/VM Version 4 (July 2001)

This edition contains updates for the General Availability of z/VM 4.1.0.

- A new Express installation method is available. This new Express installation method makes it faster and easier for you to install and service z/VM 4.1.0. There are some restrictions when using the Express installation method:
  - Only one DASD type and model can be used for your installation.
  - VM source code is not installed.
  - Only the SMALL FILEPOOL is provided (no large VMSYS (SFS) filepool).
  - Products and features are installed onto minidisks only. You cannot move them to SFS.
  - Only IBM supplied PPFs are used.
  - Customer local modifications are not allowed.
- Two new commands, SERVICE and PUT2PROD, have been added to automate the application of an RSU and CORrective service. The SERVICE command installs an RSU or applies CORrective service for the z/VM components, features, or products that are installed on the z/VM System DDR. The PUT2PROD command places components, features, or products, that were serviced using the SERVICE command, into production.

  All customers can use these commands at installation time. However, after installation is complete, they may only be used by Express cutsomers.
- DASD types 9345 and FBA are not supported.
- TCP/IP and NFS are not priced features.
- RTM, VMPRF, and DirMaint™ are preinstalled on z/VM, but they are disabled.
- CUF is part of the CMS component of z/VM.

# Part 1. z/VM System DDR Installation

**In this part, you will:**

- Be introduced to the different installation procedures that you can use to install the z/VM System DDR
- Choose an installation procedure
- Fill in worksheets
- Install the z/VM System DDR.

## z/VM System DDR Installation

# Chapter 1. Plan Your Installation

**In this chapter, you will**

- Choose the appropriate installation procedure to use based on your system requirements and available resources
- Determine the items to load for your installation
- Determine the DASD requirements for your installation
- Fill in the Installation Worksheet, the Directory Build Worksheet, and the TCP/IP configuration worksheet.

# Step 1. Understand the Requirements

Before you install z/VM Version 4 Release 3.0, you must satisfy the following requirements:

- Be sure that you have the proper processor for your z/VM 4.3.0 system.
- A local non-SNA 3270 terminal or equivalent is required for installation of z/VM.
- If you are installing from another VM system, review the *z/VM: Migration Guide*.
- See the *z/VM Program Directory* and the PSP Bucket for the latest information affecting z/VM.
- Be sure you have a full screen terminal with at least 20 lines.

## Step 2. Describe the Installation Procedures

After reading this section, you will be able to choose your installation procedure using the diagram in “Step 3. Choose the Appropriate Installation Procedure” on page 6.

- **z/VM Procedure 1**

  Use this procedure if no supported VM system is running in the processor or LPAR on which you are installing z/VM Version 4 Release 3.0.
- **z/VM Procedure 2**

  Use this procedure if you are installing second level on a supported VM system.

There are two sets of instructions for using Procedure 1 and Procedure 2:

- The *z/VM Installation and Service Summary*—contains only the commands needed to install z/VM.

  The one-page installation and service summary is packaged with the *z/VM: Installation Guide*.
- The *z/VM: Installation Guide*—contains the commands needed to install z/VM, in addition to descriptions of the parameters used and messages received.

## Step 3. Choose the Appropriate Installation Procedure

Answering the questions and following the flow chart will lead you to the installation procedure that most closely matches your requirements.

If you have any questions, refer back to “Step 2. Describe the Installation Procedures” on page 5.

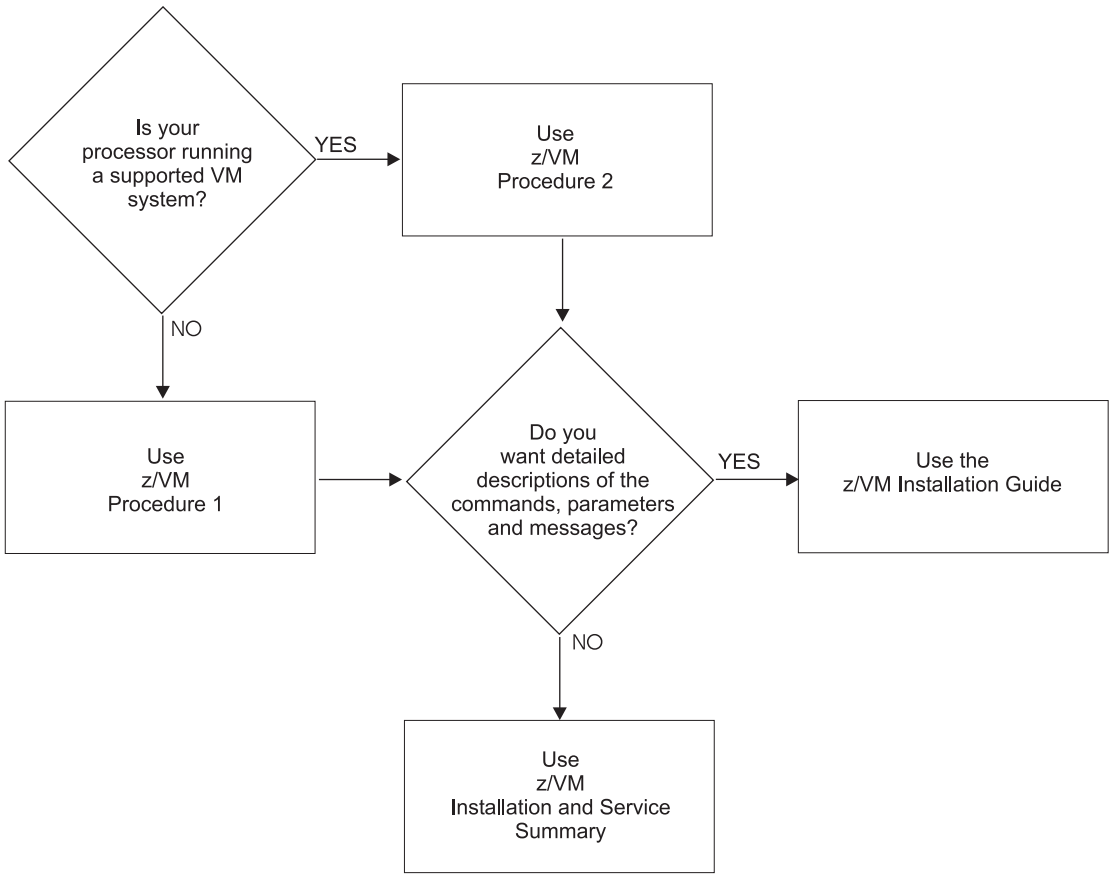



*Figure 1. Installation Flow Chart*

If you are using the procedure described in the *z/VM Installation and Service Summary*, leave this book and use the one-page document. Otherwise, continue to the next step.

## Step 4. Decide What You Want to Load

The Installation Worksheet (Table 1 on page 10) lists all the items you can load. As you review each of the following items, place a “Yes” in the ***Select To Load*** column in the Installation Worksheet for each optional item you select to load. Place a “No” in the ***Select to Load*** column in the Installation Worksheet for each optional item you select to not load. The BASE item is required; therefore, “Yes” has been placed in the ***Select To Load*** column for this item.

**Using z/VM as a base to run Linux**

If you are using z/VM as a base to run Linux, you do not need to load Source or the large FILEPOOL. Therefore, for the following items, place a “Yes” in the ***Select To Load*** column in the Installation Worksheet:

- BASE
- SMALL FILEPOOL
- OSA/SF
- TSM

For the following items, place a “No” in the ***Select To Load*** column:

- FILEPOOL
- CP, DV Source
- CMS, REXX Source
- VMSES/E Source
- RSCS Source

The BASE item is required and includes the following:

- Control Program (CP)
- Dump Viewing Facility (DV)
- Conversational Monitor System (CMS)
- REstructured eXtended eXecutor (REXX/VM)
- Virtual Machine Serviceability Enhancements Staged/Extended (VMSES/E)
- Group Control System (GCS)
- TSAF and AVS - Transparent Services Access Facility and APPC/VM VTAM® Support
- 3800 Model-3 Printer Image Library
- System minidisks
- EREP, ICKDSF, and LE/370
- UCENG Help - Uppercase English Help minidisk
- German Help - German Help minidisk
- Kanji Help - Japanese Help minidisk
- TCP/IP
- RSCS installed disabled
- RTM installed disabled
- VMPRF installed disabled
- DirMaint installed disabled
- RACF installed disabled.

The optional items you may ***Select To Load*** are:

- FILEPOOL - CMS file pools VMSYS, VMSYSU, and VMSYSR

### Decide What You Want to Load

If you want to move all products into SFS, choose FILEPOOL. You cannot select both the FILEPOOL and the SMALL FILEPOOL items.

- SMALL FILEPOOL - CMS file pools VMSYS, VMSYSU, and VMSYSR with a much smaller data minidisk area for the VMSYS file pool. You cannot select both the SMALL FILEPOOL and the FILEPOOL items.

  There is not enough space to move all products into SFS if you choose SMALL FILEPOOL.
- CP, DV source - Source minidisk shared by the CP and DV components.

  You only need this minidisk if local modifications will be made to these components.
- CMS, REXX source - Source minidisk shared by the CMS and REXX/VM components.

  You only need this minidisk if local modifications will be made to these components.
- VMSES/E source - Source minidisk for the VMSES/E component.

  You only need this minidisk if local modifications will be made to this component.
- RSCS source - Source minidisk for RSCS.

  You only need this minidisk if local modifications will be made to this component.
- Open Systems Adapter Support Facility (OSA/SF)

  OSA/SF lets you customize the integrated Open Systems Adapter (OSA) hardware feature for the OSA modes, change the OSA port parameters, and obtain status about the OSA.
- Tivoli® Storage Manager (TSM) installed disabled.

  TSM is a client/server program that provides storage management to customers in a multivendor computer environment. TSM provides an automated centrally scheduled, policy-managed backup, archive, and space management facility for file servers and workstations.

## Step 5. Select the DASD Required to Install

1. Select the 3390 DASD model (density) you will use to install. The choices are:
   - Single (1113 cylinders)
   - Double (2226 cylinders)
   - Triple (3339 cylinders)
2. Calculate the number of cylinders needed for each optional item you selected to load. See the Installation Worksheet (Table 1 on page 10).
3. Determine the number of DASD you will need.

| Device Model | Density | Number of DASD Required |
|---|---|---|
| 3390 | Single (1113 cylinders) | **5** If you selected 89 or less cylinders of optional items<br>**6** If you selected more than 89 cylinders and less than 1200 cylinders of optional items<br>**7** If you selected 1200 or more cylinders of optional items |
| | Double (2226 cylinders) | **3** If you selected fewer than 1206 cylinders of optional items<br>**4** If you selected 1206 or more cylinders of optional items |
| | Triple (3339 cylinders) | **2** If you selected fewer than 1208 cylinders of optional items<br>**3** If you selected 1208 or more cylinders of optional items |

4. In the Directory Build Worksheet (Table 2 on page 11), record the DASD model (density) and the number of DASD required (shown in the table).
5. Choose the addresses of your DASD. Select the number of DASD recorded in the Directory Build Worksheet (Table 2 on page 11) and verify that each DASD is the density recorded in the Directory Build Worksheet. Now, record the DASD addresses for each DASD in the Directory Build Worksheet (Table 2 on page 11).

## Select Your DASD

*Table 1. Installation Worksheet*

| **LOAD SELECTION SECTION** | | |
|---|---|---|
| ***Item/Minidisk*** | ***# of cylinders*** | ***Select To Load (Yes\|No)*** |
| BASE (required) | | Yes |
| FILEPOOL | 1112 | |
| SMALL FILEPOOL | 272 | |
| CP, DV Source | 208 | |
| CMS, REXX Source | 80 | |
| VMSES/E Source | 24 | |
| RSCS Source | 20 | |
| OSA/SF | 455 | |
| TSM | 210 | |
| **TAPE DRIVE SECTION** | | |
| ***Drive*** | ***Address (1st Level)*** | |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| **MISCELLANEOUS INFORMATION** | | |
| *consaddr* (Primary System Console Address) : | | |

*Table 2. Directory Build Worksheet*

***DASD Model (Density):*** _____

***Number of DASD Required:*** _____

| ***Label*** | ***Addr*** |
|---|---|
| 430RES | |
| 430W01 | |
| 430W02 | |
| 430W03 | |
| 430W04 | |
| 430W05 | |
| 430W06 | |
| | |
| | |

# Step 6. Decide If You Want to Establish Basic Connectivity to Your IP Network

After you have completed your z/VM installation, you can optionally create a minimal TCP/IP configuration that establishes basic connectivity to your IP network. If you choose to perform this configuration, you must gather the following information from your network system administrator and record the information in the TCP/IP Configuration Worksheet (Table 3) and the appropriate interface worksheet.

*Table 3. TCP/IP Configuration Worksheet*

| | |
|---|---|
| User ID of the VM TCP/IP stack virtual machine (8): (Initially displays the value TCP/IP) | |
| Host name (20): | |
| Domain name (40): | |
| DNS IP address (three choices) (15): | 1) _____<br>2) _____<br>3) _____ |
| Gateway IP address (15): | |
| Interface name (16): | |
| Device number (4): | |
| IP address (15): | |
| Subnet mask (15): | |
| Choose the interface you will be using (check one): | __ QDIO<br>__ LCS<br>__ HiperSockets<br>__ CLAW<br>__ CTC<br><br>Refer to the appropriate interface worksheet to gather more information. |

*Table 4. QDIO Interface Worksheet*

| | |
|---|---|
| Network type (select one): | __ Ethernet<br>__ Token Ring |
| Port name (8): | |
| Router type (select one): | __ Primary<br>__ Secondary<br>__ None |
| Maximum Transmission Unit (MTU) size (5): | |

*Table 5. LCS Interface Worksheet*

| | |
|---|---|
| Network type (select one): | __ Ethernet<br>__ Token Ring<br>__ FDDI |
| Port/Adapter number (3): | |
| Maximum Transmission Unit (MTU) size (5): | |

*Table 6. HiperSockets Interface Worksheet*

| | |
|---|---|
| Maximum Frame Size (MFS): (in kilobytes) | |

*Table 7. CLAW Interface Worksheet*

| | |
|---|---|
| CLAW host name (8):<br>(This name must match the value configured on the CLAW device) | |
| CLAW adapter name (8):<br>(This name must match the value configured on the CLAW device): | |
| Maximum Transmission Unit (MTU) size (5): | |

*Table 8. CTC Interface Worksheet*

| | |
|---|---|
| Write Channel Device Number (select one): | __ This choice contains the device number specified on the main z/VM TCP/IP Configuration Wizard panel.<br>__ This choice contains the device number specified on the main z/VM TCP/IP Configuration Wizard panel + 1. |
| Maximum Transmission Unit (MTU) size (5): | |
| Peer IP Address (15): | |

## Establish Basic Connectivity to Your IP Network

# Chapter 2. Procedure 1

**In this chapter, you will:**

- Use step-by-step procedures to install the z/VM System DDR in a new system environment.

# Step 1. Restore the Initial Installation System (IIS)

**In this step, you will:**

- Mount volume 1 of the z/VM System DDR on a tape drive
- Initialize, format, and relabel the DASD
- Load down the Initial Installation System (IIS) from the z/VM System DDR.

**Notes:**

1. The IPLable Device Support Facilities (ICKDSF) program in Tape File 1 of the z/VM System DDR may not be at the latest service level. Use this copy of the program only for installation.
2. Make sure that any DASD with the same labels you are using for installation are **not** attached to your system.

1. Before you begin, read Chapter 1, "Plan Your Installation" on page 3.
2. **If possible**, power off all devices you do not plan to use during installation. This precaution is advisable because the initial install program on the z/VM System DDR assumes that the first device to present an interrupt is the system console.

   **Note:** If your system has a 3725, 3745, 3704, or 3705 controller attached and available to it and that controller is ALSO available and active to other systems, it is possible that the IPL of the z/VM install tape (which will IPL ICKDSF) will cause the controller to re-IPL. To prevent this from occurring, do one of the following:

   a. Make the controller channel path ID (CHPID) unavailable at the system console
   b. Make sure the controller is configured so the system running z/VM cannot IPL the controller.
3. Refer to the Directory Build Worksheet (Table 2 on page 11) to ensure all the DASD addresses listed on the worksheet are available for use. Follow the operation manual for your own hardware.

   **Attention:** Make sure that any DASD with the same labels that you are using for installation are **never** attached to your system. Any such DASD may be brought online when you IPL the Initial Installation System in "Step 3. Restore the Initial Installation System (IIS)" on page 32. Either remove these DASD now and continue to substep 4, or continue to substep 4 now and use the Device Support Facilities (ICKDSF) to relabel the DASD, which is described in substep 7 on page 17.
4. Mount volume 1 of the z/VM System DDR on a tape drive.

   If you are installing with CDROM and you are:

   - Installing from a PS2 with OMA/2, refer to the *Optical Media Attach/2 User's Guide* and the *Optical Media Attach/2 Technical Reference*.
   - Installing from a Multiprise® 3000, refer to the *Emulated I/O User's Guide* and AWSOMA.DOC in the Service Element directories.
5. IPL the tape drive, which contains volume 1, to load the Device Support Facilities (ICKDSF) program. Follow the **hardware IPL** procedure specified for your processor.

   Refer to your processor's hardware operation manuals for help.

   **Notes:**

   a. For more information about the Device Support Facilities (ICKDSF), see the *Device Support Facilities User's Guide and Reference*.
6. Wait 60 seconds or so for the IPL to complete. You will see no messages. Press **Enter** to create an interrupt. If you do not see a response, you pressed **Enter** before the IPL was complete. Reset the keyboard. Wait approximately 60 seconds and press **Enter** again.

**Note:** You may have to wait approximately 15 minutes on a CD-ROM device.

**ENTER**

```
CLEAR SCREEN WHEN READY
```

**Reset**
**Clear**

Press the **Reset** key to unlock the keyboard.
Depending on how your console is defined, you may not have to clear your screen.

```
ICK005E DEFINE INPUT DEVICE, REPLY
          'DDDD,CUU' OR 'CONSOLE'
ENTER INPUT/COMMAND:
```

This message tells you that the Device Support Facilities (ICKDSF) is loaded and ready.

**console**

```
CONSOLE
ICK006E DEFINE OUTPUT DEVICE, REPLY
          'DDDD,CUU' or 'CONSOLE'
ENTER INPUT/COMMAND:
```

**console**

```
CONSOLE
ICKDSF - SA/XA/ESA DEVICE SUPPORT FACILITIES
  nn.n TIME:hh:mm:ss mm/dd/yy    PAGE 1
ENTER INPUT/COMMAND:
```

7. If you have DASD with the same labels listed in the Directory Build Worksheet (Table 2 on page 11) that are not being used for this installation, use the ICKDSF program to relabel them. If there is more than one DASD to relabel, relabel one at a time.

**cpvolume label unit(***dasdaddr***) novfy volid(***volid***)**

*dasdaddr* is the address of the DASD you want to relabel, and *volid* is the new label you will use for that DASD.

```
ICK00700I DEVICE INFORMATION FOR dasdaddr IS
            CURRENTLY AS FOLLOWS:
          PHYSICAL DEVICE = xxxx.
          STORAGE CONTROLLER = xxxx
          STORAGE CONTROL DESCRIPTOR = xx
          DEVICE DESCRIPTOR = xx
ICK003D REPLY U TO ALTER VOLUME dasdaddr CONTENTS,
          ELSE T
ENTER INPUT/COMMAND:
```

**u**

```
   .
   .
   .
ENTER INPUT/COMMAND:
```

If you have another initialized DASD to relabel, **repeat** the CPVOLUME LABEL command.

8. If your DASD are already initialized, skip to substep 10 on page 18 to format them.

9. For uninitialized DASD, use the INSTALL command to initialize the DASD. If there is more than one uninitialized DASD, initialize one at a time.

**install unit(***dasdaddr***) novfy**

*dasdaddr* is the address of the DASD you want to initialize. *dasdaddr* is recorded in your Directory Build Worksheet (Table 2 on page 11).

```
ICK00700I DEVICE INFORMATION FOR dasdaddr IS
            CURRENTLY AS FOLLOWS:
          PHYSICAL DEVICE = xxxx.
          STORAGE CONTROLLER = xxxx
          STORAGE CONTROL DESCRIPTOR = xx
          DEVICE DESCRIPTOR = xx
ICK003D REPLY U TO ALTER VOLUME dasdaddr CONTENTS,
          ELSE T
ENTER INPUT/COMMAND:
u
  ⋮
ENTER INPUT/COMMAND:
```

The system takes at least 20 to 40 minutes to inspect and initialize a DASD. You will get a series of ICK messages that describe the status of the device being initialized at the point that the initialization is almost complete.

If you have another DASD to initialize, **repeat** the INSTALL command.

10. Format the 430RES and each DASD listed on your Directory Build Worksheet (Table 2 on page 11). Issue the following command for each DASD.

    **cpvolume format unit(***dasdaddr***) novfy volid(***volid***) mode(esa) nofiller**

    *dasdaddr* is the address of the DASD you want to format. *dasdaddr* is recorded on your Directory Build Worksheet.

    *volid* is the volume identifier (***Label***) listed in your Directory Build Worksheet.

```
  ⋮
ICK003D REPLY U TO ALTER VOLUME dasdaddr CONTENTS,
          ELSE T
ENTER INPUT/COMMAND:
u
  ⋮
ENTER INPUT/COMMAND:
```

If you have another DASD to format, **repeat** the CPVOLUME FORMAT command.

11. IPL the tape drive again to load the DDR program from tape. You do not have to exit the ICKDSF program. Follow the **hardware IPL** procedure specified for your processor.

    During hardware IPL procedures, you may specify a console address in the Load Parameter field.

**+———Load Parameter Specified———+**

If the Load Parameter field is used, the DDR program will appear at the specified console.

**+———End of Load Parameter Specified———+**

**+———Load Parameter Not Specified———+**

If no console address is used, you will need to wait a minute or so for the IPL to complete. You will see no messages. Press **Enter** to create an interrupt. If you do not see a response, you pressed **Enter** before the IPL was complete. Reset the keyboard. Wait approximately 60 seconds and press **Enter** again.

**ENTER**

```
CLEAR SCREEN WHEN READY
```

**Reset**
**Clear**

Press the **Reset** key to unlock the keyboard. Depending on your console, you may not have to clear your screen.

**+———End of Load Parameter Not Specified———+**

12. Answer the following prompts from the DDR program to load the Initial Installation System from the z/VM System DDR to the system residence device (430RES).

```
z/VM DASD DUMP/RESTORE PROGRAM
ENTER CARD READER ADDRESS OR CONTROL STATEMENTS
ENTER:
```
**sysprint cons**
```
ENTER:
```
**input** *tapeaddr* **tape (skip 1 rew**
```
ENTER:
```

*tapeaddr* is the address of the tape drive where you mounted volume 1.

By typing the word **tape**, the tape device type is automatically identified by the DDR program.

**output** *dasdaddr* **dasd 430res**

*dasdaddr* is the address of the system residence device (430RES) recorded on your Directory Build Worksheet.

DDR checks the DASD label to make sure it is 430RES, the system residence device.

```
ENTER:
```
**restore all**
```
HCPDDR725D SOURCE DASD DEVICE WAS (IS) LARGER THAN OUTPUT DEVICE
DO YOU WISH TO CONTINUE?  RESPOND YES OR NO:
```

You may or may not receive this message. This is not a problem. Respond **yes** and continue.

**yes**
```
RESTORING 430RES
DATA DUMPED mm/dd/yy
  AT hh.mm.ss GMT FROM 430RES
  RESTORED TO 430RES
```

Informational messages: GMT means Greenwich Mean Time. The exact cylinder extents vary according to the device type.

```
INPUT CYLINDER EXTENTS     OUTPUT CYLINDER EXTENTS
      START       STOP                 START        STOP
   nnnnnnnn   nnnnnnnn              nnnnnnnn    nnnnnnnn
   nnnnnnnn   nnnnnnnn              nnnnnnnn    nnnnnnnn
   nnnnnnnn   nnnnnnnn              nnnnnnnn    nnnnnnnn
   nnnnnnnn   nnnnnnnn              nnnnnnnn    nnnnnnnn
   nnnnnnnn   nnnnnnnn              nnnnnnnn    nnnnnnnn
 END OF RESTORE
BYTES RESTORED nnnnnnnnnn

ENTER:
```
**ENTER**

Press **Enter** to end the program.

```
END OF JOB
```

# Step 2. IPL the z/VM IIS

**In this step, you will:**

- Bring up the z/VM Initial Installation System first-level

1. Bring up the z/VM Version 4 Release 3.0 system from the DASD device you just restored it to; that is, IPL the real address of 430RES noted on your Directory Build Worksheet. Follow the specified **hardware IPL** operation for your processor. You **must** specify your operator console address on the Load Parameter field on the hardware system console. **Record** this console address (*consaddr*) in the Installation Worksheet (Table 1 on page 10).

   **Note:** Refer to the proper hardware operation manuals for help.

2. The stand alone program loader panel is displayed on the VM operator console you specified in substep 1.

```
STAND ALONE PROGRAM LOADER: z/VM VERSION 4 RELEASE 3.0

DEVICE NUMBER:   dasdaddr   MINIDISK OFFSET:   nnnnnnnn   EXTENT:  1

MODULE NAME:     CPLOAD     LOAD ORIGIN:       1000

--------------------------------IPL PARAMETERS--------------------------------
cons=consaddr

-----------------------------------COMMENTS-----------------------------------




--------------------------------------------------------------------------------


9= FILELIST  10= LOAD  11= TOGGLE EXTENT/OFFSET
```

*Figure 2. Sample Stand Alone Program Loader Panel*

3. Move the cursor to the IPL PARAMETERS field and type:

   **cons=***consaddr*

   As shown in Figure 2, *consaddr* is the primary system console address recorded in the Installation Worksheet (Table 1 on page 10). This statement defines the operator console. Spaces are not allowed around the equal sign.

4. Press **PF10** to load.

   **PF10**

5. The IPL of your z/VM system continues:

```
hh:mm:ss z/VM V4 R3.0
          SERVICE LEVEL nnnn (mode)

hh:mm:ss SYSTEM NUCLEUS CREATED ON yyyy-mm-dd AT hh:mm:ss,
          LOADED FROM 430RES
hh:mm:ss ****************************************
hh:mm:ss * LICENSED MATERIALS - PROPERTY OF IBM*   *
hh:mm:ss * 5739-A03 (C) COPYRIGHT IBM CORP. 1983,  *
hh:mm:ss * 2002. ALL RIGHTS RESERVED.             *
hh:mm:ss * US GOVERNMENT USERS RESTRICTED RIGHTS - *
hh:mm:ss * USE, DUPLICATION OR DISCLOSURE         *
hh:mm:ss * RESTRICTED BY GSA ADP SCHEDULE CONTRACT *
hh:mm:ss * WITH IBM CORP.                         *
hh:mm:ss *                                        *
hh:mm:ss * * TRADEMARK OF INTERNATIONAL BUSINESS   *
hh:mm:ss *   MACHINES                             *
hh:mm:ss ****************************************
hh:mm:ss HCPZCO6718I Using parm disk 1 on volume volid (device xxxx).
hh:mm:ss HCPZCO6718I Parm disk resides on cylinders xx through xx.
```

⋮

You may receive an informational message, HCPISU951I, about volumes not mounted. If you are not using those volume labels, ignore this message.

**Attention:** If you receive informational message HCPIIS954I, you have duplicate volumes with the same label and must correct this error before continuing. Refer back to substep 3 on page 16.

```
hh:mm:ss Start ((Warm|Force|COLD|CLEAN) (DRain)
          (DIsable) (NODIRect) (NOAUTOlog)) or (SHUTDOWN)
```

**cold drain noautolog**

Because there is no data or accounting information to recover, use **cold drain** to request a cold start. Use **noautolog** at this point because you do not need the servers and all user IDs logged on.

6. If it has not been set before, set the TOD (time-of-day) clock using standard operating procedures. Consult *z/VM: System Operation* for those procedures.

```
NOW hh:mm:ss {EST|EDT} weekday yyyy-mm-dd
Change TOD clock (yes|no)
```

You will see this message only if the TOD clock has been set before.

**{yes|no}**

Answer **yes** to reset the TOD clock, **no** to keep the current setting.

**+———Yes Reply System Response———+**

```
Set date MM/DD/YY
```

Type in the month, day, and year, separated by slash marks.

```
Set time HH:MM:SS
```

Type in the hours, minutes, and seconds, separated by colons.

```
Press "TOD ENABLE SET" key at designated instant
NOW hh:mm:ss {EST|EDT} weekday mm/dd/yy
Change TOD clock (Yes|No)
```

**no**

**+———End of Yes Reply System Response———+**

If you are using a multiprocessor, you may receive a message here concerning the clocks of the different images of the processor. If you do, see *z/VM: System Operation* for information about resetting the clocks.

### IPL the z/VM IIS

7. CP logs on the primary system operator (user ID OPERATOR).

```
hh:mm:ss The directory on volume 430RES at address nnnn
           has been brought online.
hh:mm:ss HCPWRS2513I
hh:mm:ss HCPWRS2513I Spool files available     {nnnn|NONE}
```

**Note:** Depending on the type of spool files available, you may receive the following prompt:

**+———Spool Files Prompt———+**

```
hh:mm:ss HCPWRS2513I
hh:mm:ss HCPWRS2513I Spool files on offline volumes      {nnnn|NONE}
hh:mm:ss HCPWRS2513I Spool files with I/O errors         {nnnn|NONE}
hh:mm:ss HCPWRS2513I Spool files with control errors     {nnnn|NONE}
hh:mm:ss HCPWRS2513I Spool files to be discarded         {nnnn|NONE}
hh:mm:ss HCPWRS2513I                                      -------
hh:mm:ss HCPWRS2513I Total files to be deleted            nnnn
hh:mm:ss HCPWRS2511A

hh:mm:ss HCPWRS2511A Spool files will be deleted because of
                      COLD start.
hh:mm:ss HCPWRS2511A No files have been deleted yet.



hh:mm:ss HCPWRS2511A To continue COLD start and delete files,
                       enter GO.
hh:mm:ss HCPWRS2511A To stop COLD start without deleting
                       files, enter STOP.
```

**go**

Here the system gives you an opportunity to stop the cold start and save your spool files. You do not need to save any spool files at this time; answer **go**.

**+———End of Spool Files Prompt———+**

```
hh:mm:ss HCPWRS2512I Spooling initialization is complete.
hh:mm:ss DASD nnnn dump unit CP IPL pages nnnn
hh:mm:ss HCPWED876I The processor controller will not notify VM prior to
hh:mm:ss HCPWED876I deactivation. To ensure guest integrity, issue the VM
hh:mm:ss HCPWED876I SHUTDOWN command before deactivating it.
hh:mm:ss HCPAAU2700I System gateway ZVMV4R30 identified.
z/VM Version 4 Release 3.0, Service Level 0000 (64-bit),
built on IBM Virtualization Technology
hh:mm:ss There is no logmsg data
hh:mm:ss FILES:   NO RDR,   NO PRT,   NO PUN
hh:mm:ss LOGON AT hh:mm:ss EDT DAY mm/dd/yy
hh:mm:ss GRAF  nnnn LOGON  AS  OPERATOR USERS = n
hh:mm:ss HCPIOP952I nnnnM system storage
hh:mm:ss FILES: nnnnnnnn RDR, nnnnnnnn PRT,      NO PUN
```

8. Disconnect from the OPERATOR user ID.

**disconnect**

```
DISCONNECT AT hh:mm:ss {EST|EDT} weekday mm/dd/yy

Press enter or clear key to continue
```

**ENTER**

9. Log on to the MAINT user ID.

**ENTER** The default password for MAINT is MAINT.

**logon maint**

```
z/VM Version 4 Release 3.0, Service Level 0000 (64-bit),
built on IBM Virtualization Technology
There is no logmsg data
FILES:   NO RDR,   NO PRT,   NO PUN
LOGON AT hh:mm:ss EDT DAY mm/dd/yy
DMSIND2015W Unable to access the Y-disk. Filemode Y (19E)not accessed
```

z/VM V4.3.0 *yyyy-mm-dd hh:mm*

**ENTER**

```
DMSACP113S B(5E5) not attached or invalid device address
DMSACP113S D(51D) not attached or invalid device address
Ready; T=n.nn/n.nn hh:mm:ss
```

# Step 3. Select the Items to Load from the z/VM System DDR

**In this step, you will:**

- Run INSTPLAN to determine which items you want to load from the z/VM System DDR.

1. Run INSTPLAN to select items to load and the DASD model (density) on which to install.

   **instplan fullfunc**

```
                    *** z/VM INSTALLATION PLANNING ***

Mark items selected to be loaded with an S in the STATUS column, and those
selected not to be loaded with an N .

Status       Item        Status       Item        Status       Item
------ ----------------- ------ ----------------- ------ ---------------
  S    BASE                N    FILEPOOL            S    SMALL FILEPOOL
  N    CP/DV SOURCE        N    CMS/REXX SOURCE     N    VMSES SOURCE
  N    RSCS SOURCE         S    OSA/SF              S    TSM



Place a nonblank character in front of the DASD model layout onto which the
selected items will be loaded.  Only one layout may be selected. The number
in parenthesis is the number of packs needed to load the items selected.

   _ (6) 3390 Single    _ (3) 3390 Double    _ (2) 3390 Triple


    PF1 = HELP   PF3/PF12 = QUIT   PF5 = Process   ENTER = Refresh
```

   a. Refer to the Installation Worksheet (Table 1 on page 10). In the z/VM INSTALLATION PLANNING panel, place an “N” in the STATUS column for each item you did not choose to load. Place an “S” in the STATUS column for each item you chose to load.

   b. Place a nonblank character in front of the DASD model that matches the ***Device Density*** in the Directory Build Worksheet (Table 2 on page 11).

   c. After filling in the STATUS column and selecting the DASD model to be used for installation, press **PF5** to complete the planning step.

```
HCPIPX8475I THE ITEMS YOU SELECTED TO BE LOADED ARE:
            BASE  SMALL FILEPOOL  OSA/SF  TSM

            THE ITEMS YOU SELECTED NOT TO BE LOADED ARE:
            FILEPOOL  CP/DV SOURCE  CMS/REXX SOURCE
            VMSES SOURCE  RSCS SOURCE

            THE DASD TYPE YOU SELECTED TO LOAD ON IS:
            3390 model

            THE PACKS NEEDED TO LOAD THESE ITEMS ARE:
            430RES 430W01 ...
HCPINP8391I INSTPLAN EXEC ENDED SUCCESSFULLY
Ready; T=n.nn/n.nn hh:mm:ss
```

2. Choose the addresses of your tape drives.

   If you are installing on CD-ROM, you need tape drives for two volumes.

If you are installing on 3590 tape, you need a tape drive for one volume.

If you are installing on 3480 or 3490 tape, you need tape drives for eight volumes. If you are not loading ADSM or any Source, you do not need volume 8.

3. Record the real address (*tapeaddr*) of each tape drive in the ***1st Level*** address column in the **TAPE DRIVE SECTION** in the Installation Worksheet (Table 1 on page 10).

**What to Do Next**

Go to Chapter 4, “Load the System DDR” on page 41.

## Select the Items to Load

# Chapter 3. Procedure 2

**In this chapter, you will:**

Use step-by-step procedures to install the z/VM System DDR from a VM system.

# Step 1. Load the Installation Tools from the z/VM System DDR

**In this step, you will**

- Log on to a first-level user ID
- Attach tape drives
- Mount the z/VM System DDR tapes on the tape drives
- Load the installation tools

1. Before you begin, read Chapter 1, “Plan Your Installation” on page 3.
2. From your current operating system, log on to a first-level user ID with privilege classes B through G and 64MB virtual storage, which you will use to install z/VM Version 4 Release 3.0. It is a good idea **not** to grant your user ID **privilege class A authority**, so that you cannot accidentally shutdown the first-level system.
3. Verify that you have a 191 disk accessed as A and it has at least 2 cylinders of available space. The installation tools will be loaded to the work disk.

   **access 191 a**

   ```
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

4. Choose the addresses of your tape drives.

   If you are installing on CD-ROM, you need tape drives for two volumes.

   If you are installing on 3590 tape, you need a tape drive for one volume.

   If you are installing on 3480 or 3490 tape, you need tape drives for eight volumes. If you are not loading TSM or any Source, you do not need volume 8.

   **Note:** If you use a unique tape drive for each volume, or use a tape stacker in automatic mode, the tapes will be loaded without interruption. If you must use one tape drive for multiple volumes, you will be prompted by the INSTALL EXEC when a tape volume needs to be changed.
5. Record the real address (*tapeaddr*) of each tape drive in the ***1st Level*** column in the **TAPE DRIVE SECTION** in the Installation Worksheet (Table 1 on page 10).
6. Attach the tape drives.
   - If you are installing with CD-ROM and you are:
     - Installing from a PS2 with OMA/2, refer to the *Optical Media Attach/2 User's Guide* and the *Optical Media Attach/2 Technical Reference* for information about attaching the tape drives.
     - Installing from a Multiprise 3000, refer to the *Emulated I/O User's Guide* and AWSOMA.DOC in the Service Element directories for information about attaching the tape drives.
   - If you are installing with 3590, 3480, or 3490 tape, enter the following ATTACH command for each tape drive needed. Volume 1 must be mounted on 181.

     **attach** *tapeaddr* *** 181**

     ```
     TAPE tapeaddr ATTACHED TO userID 181
     Ready; T=n.nn/n.nn hh:mm:ss
     ```

     *tapeaddr* is the ***1st Level*** address of the tape drive where the z/VM System DDR tapes will be mounted. *tapeaddr* is recorded in the **TAPE DRIVE SECTION** in the Installation Worksheet (Table 1 on page 10). *userID* is the first-level user ID logged on to in the previous substep.
7. Mount the z/VM System DDR tapes on the tape drives. Volume 1 must be mounted at address 181.

8. Load the installation tools from volume 1 of the z/VM System DDR to your work disk.

```
vmfplc2 rew
Ready; T=n.nn/n.nn hh:mm:ss
vmfplc2 fsf 3
Ready; T=n.nn/n.nn hh:mm:ss
vmfplc2 load * * a
 Loading ...
   :
 End-of-file or end-of-tape
Ready; T=n.nn/n.nn hh:mm:ss
```

# Step 2. Select the Items to Load from the z/VM System DDR

**In this step, you will:**

- Run INSTPLAN to determine which items you want to load from the z/VM System DDR.

1. Run INSTPLAN to select items to load and the DASD model on which to install.

   **instplan fullfunc**

```
                    *** z/VM INSTALLATION PLANNING ***

Mark items selected to be loaded with an S in the STATUS column, and those
selected not to be loaded with an N .

Status       Item        Status       Item        Status       Item
------ ----------------- ------ ----------------- ------ ---------------
  S    BASE                N    FILEPOOL          S    SMALL FILEPOOL
  N    CP/DV SOURCE        N    CMS/REXX SOURCE   N    VMSES SOURCE
  N    RSCS SOURCE         S    OSA/SF            S    TSM



Place a nonblank character in front of the DASD model layout onto which the
selected items will be loaded.  Only one layout may be selected. The number
in parenthesis is the number of packs needed to load the items selected.

   _ (6) 3390 Single    _ (3) 3390 Double    _ (2) 3390 Triple


    PF1 = HELP   PF3/PF12 = QUIT   PF5 = Process   ENTER = Refresh
```

*Figure 3. Installation Planning Panel*

   a. Refer to the Installation Worksheet (Table 1 on page 10). In the z/VM INSTALLATION PLANNING panel, place an “N” in the STATUS column for each item you did not choose to load. Place an “S” in the STATUS column for each item you chose to load.

   b. Place a nonblank character in front of the DASD model that matches the ***Device Density*** in the Directory Build Worksheet (Table 2 on page 11).

   c. After filling in the STATUS column and selecting the DASD model to be used for installation, press **PF5** to complete the planning step.

```
HCPIPX8475I THE ITEMS YOU SELECTED TO BE LOADED ARE:
            BASE  SMALL FILEPOOL  OSA/SF  TSM

            THE ITEMS YOU SELECTED NOT TO BE LOADED ARE:
            FILEPOOL  CP/DV SOURCE  CMS/REXX SOURCE
            VMSES SOURCE  RSCS SOURCE

            THE DASD TYPE YOU SELECTED TO LOAD ON IS:
            3390 model

            THE PACKS NEEDED TO LOAD THESE ITEMS ARE:
            430RES 430W01 ...
HCPINP8392I INSTPLAN EXEC ENDED SUCCESSFULLY
Ready; T=n.nn/n.nn hh:mm:ss
```

# Step 3. Restore the Initial Installation System (IIS)

**In this step, you will:**

- Format the DASD
- Load down the Initial Installation System (IIS) from the z/VM System DDR.

1. Refer to the Directory Build Worksheet (Table 2 on page 11). Attach all the DASD listed in the worksheet that are not already attached. Enter the following ATTACH command for each DASD:

   **attach** *dasdaddr* *****

   ```
   DASD dasdaddr ATTACHED TO userID dasdaddr
      ⋮
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

   *dasdaddr* is the address of the DASD. *userID* is the first-level user ID logged on to previously.

   **Attention:** Issue the QUERY DASD ATTACH * command to make sure that any DASD with the same labels that you are using for installation are **not** already attached. You must detach any other DASD with these labels now to **prevent** bringing them online.

2. Run INSTIIS to format and label your installation DASD and to restore the IIS.

   **instiis**

```
          *** z/VM INSTALLATION DASD FORMAT/RESTORE ***


 DASD         DASD              VIRTUAL TAPE          DO NOT
 LABEL       ADDRESS              ADDRESS           FORMAT DASD
================================================================
 430RES       ____                 ___                __
 430W01       ____
 430W02       ____
 430W03       ____
 430W04       ____
 430W05       ____









PF1 = HELP    PF3/PF12 = QUIT    PF5 = PROCESS    ENTER = REFRESH
```

*Figure 4. Installation DASD Format and Restore Panel (3390 Model Layout)*

a. Fill in the DASD addresses using the information from the Directory Build Worksheet (Table 2 on page 11). For detailed information, press **PF1** for HELP.

b. Fill in the tape address (181) where volume 1 is mounted.

c. Press **PF5** to process.

Depending on whether you selected to format your DASD or selected not to format your DASD, one of the following groups of messages is displayed:

- If you put an X in the DO NOT FORMAT DASD column, the following is displayed:

```
HCPIIX8381I CHECKING TAPE VOLUME NUMBER FOR DRIVE 181

HCPIIX8483R YOU HAVE SELECTED NOT TO FORMAT YOUR DASD.
            THIS ASSUMES YOU HAVE DONE THIS PRIOR TO
            ENTERING THIS EXEC.  ANY PROCESSING WHICH
            FOLLOWS THIS PROMPT COULD RESULT IN ERRORS
            IF YOU HAVE NOT MANUALLY FORMATTED AND
            LABELED YOUR DASD.

 DO YOU WANT TO CONTINUE ? (Y/N)
```

**y**

```
HCPIIX8380I RESTORING IIS TO 430RES
RESTORING 430RES
DATA DUMPED   mm/dd/yy AT hh.mm.ss  GMT FROM 430RES RESTORED TO 430RES
INPUT CYLINDER EXTENTS         OUTPUT CYLINDER EXTENTS
   START       STOP               START        STOP
nnnnnnnn   nnnnnnnn            nnnnnnnn   nnnnnnnn
nnnnnnnn   nnnnnnnn            nnnnnnnn   nnnnnnnn
nnnnnnnn   nnnnnnnn            nnnnnnnn   nnnnnnnn
nnnnnnnn   nnnnnnnn            nnnnnnnn   nnnnnnnn
nnnnnnnn   nnnnnnnn            nnnnnnnn   nnnnnnnn
END OF RESTORE
 BYTES RESTORED nnnnnnnnnn
```

```
END OF JOB
HCPINI8392I INSTIIS EXEC ENDED SUCCESSFULLY
Ready; T=n.nn/n.nn hh:mm:ss
```

- If you did not put an X in the DO NOT FORMAT DASD column, therefore, choosing to format your DASD, the following is displayed:

```
HCPIIX8381I CHECKING TAPE VOLUME NUMBER FOR DRIVE 181

HCPIIX8377R YOU HAVE SELECTED TO FORMAT THE FOLLOWING PACKS:

    430RES     dasdaddr1
    dasdname2  dasdaddr2
    dasdname3  dasdaddr3

⋮
               ALL DATA ON THESE PACKS WILL BE LOST.
 DO YOU WANT TO CONTINUE ? (Y/N)
```

**y**

```
HCPIIX8490I NOW FORMATTING PACK dasdaddr1
HCPIIX8490I NOW FORMATTING PACK dasdaddr2
HCPIIX8490I NOW FORMATTING PACK dasdaddr3
⋮
HCPIIX8380I RESTORING IIS TO 430RES
RESTORING 430RES
DATA DUMPED   mm/dd/yy AT hh.mm.ss  GMT FROM 430RES RESTORED TO 430RES
INPUT CYLINDER EXTENTS      OUTPUT CYLINDER EXTENTS
      START       STOP         START        STOP
   nnnnnnnn   nnnnnnnn      nnnnnnnn    nnnnnnnn
   nnnnnnnn   nnnnnnnn      nnnnnnnn    nnnnnnnn
   nnnnnnnn   nnnnnnnn      nnnnnnnn    nnnnnnnn
   nnnnnnnn   nnnnnnnn      nnnnnnnn    nnnnnnnn
   nnnnnnnn   nnnnnnnn      nnnnnnnn    nnnnnnnn
END OF RESTORE
 BYTES RESTORED nnnnnnnnnn


END OF JOB
HCPINI8392I INSTIIS EXEC ENDED SUCCESSFULLY
Ready; T=n.nn/n.nn hh:mm:ss
```

3. If you are installing from CD-ROM or 3590, skip this substep and go to “Step 4. IPL the z/VM IIS” on page 37 .

   If you are installing from 3480 or 3490 tape, continue with this substep. You are finished using volume 1 of the z/VM System DDR. Unload the tape from the drive.

   **tape run**

   ```
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

# Step 4. IPL the z/VM IIS

**In this step, you will:**

- Bring up the Initial Installation System

  When you IPL second-level note the following:

  – Contention for service by the devices on shared control units may result in this step taking longer than it would when you are installing a first-level system.

1. Enter the following commands to clear your virtual machine and make sure that the z/VM system will recognize your terminal as a 3277, 3278, or 3279:

   **system clear**

   Reset and clear your virtual machine storage.

   ```
   Storage cleared - system reset.
   ```

   **terminal conmode 3270**

2. Determine the amount of your virtual storage. If it is less than 64MB, define your storage to 64MB.

   **query virtual storage**

   Run the DEFINE command **only** if you have less than 64M of storage.

   ```
   STORAGE = nnnnM
   ```

   **define storage 64m**

   ```
   STORAGE =   64M
   Storage cleared - system reset
   ```

3. Set virtual machine mode to XA.

   **set machine xa**

   Setting the virtual machine to XA architecture causes a reset as if you entered SYSTEM CLEAR. If your machine is already in XA mode, you will not get a response.

   ```
   SYSTEM RESET
   SYSTEM = XA
   ```

4. Query the console and **record** the virtual console address (*consaddr*) in the Installation Worksheet (Table 1 on page 10). The address is required in the next substep.

   **query console**

   *consaddr* is the address of your virtual console.

   ```
   CONS consaddr
     ⋮
   ```

5. IPL the IIS you loaded to the system residence device (430RES).

   **ipl** *dasdaddr* **clear loadparm** *consaddr*

   **Clear** is necessary. Do not omit it.

   *dasdaddr* is the address of the system residence device (430RES). Refer to your Directory Build Worksheet.

   *consaddr* is the address of your virtual console recorded previously.

   ```
   MORE...
   ```

   **Clear**

## IPL the z/VM IIS

The stand alone program loader panel displays after issuing the IPL command.

```
 STAND ALONE PROGRAM LOADER: z/VM VERSION 4 RELEASE 3.0

 DEVICE NUMBER:   dasdaddr   MINIDISK OFFSET:   nnnnnnnn   EXTENT:  1

 MODULE NAME:     CPLOAD     LOAD ORIGIN:       1000

 --------------------------------IPL PARAMETERS--------------------------------
cons=consaddr

 ----------------------------------COMMENTS----------------------------------




 --------------------------------------------------------------------------------


 9= FILELIST  10= LOAD  11= TOGGLE EXTENT/OFFSET
```

*Figure 5. Sample Stand Alone Program Loader Panel*

6. Move the cursor to the IPL PARAMETERS field and type

   **cons=***consaddr*

   As shown in Figure 5, *consaddr* is the primary system console address recorded in the Installation Worksheet (Table 1 on page 10). This statement defines the operator console. Spaces are not allowed around the equal sign.

7. Press **PF10** to load.

   **PF10**

8. The IPL of your z/VM system continues:

```
hh:mm:ss z/VM V4 R3.0
          SERVICE LEVEL nnnn (mode)

hh:mm:ss SYSTEM NUCLEUS CREATED ON yyyy-mm-dd AT hh:mm:ss,
          LOADED FROM 430RES
hh:mm:ss ******************************************
hh:mm:ss * LICENSED MATERIALS - PROPERTY OF IBM*   *
hh:mm:ss * 5739-A03 (C) COPYRIGHT IBM CORP. 1983,  *
hh:mm:ss * 2002. ALL RIGHTS RESERVED.              *
hh:mm:ss * US GOVERNMENT USERS RESTRICTED RIGHTS - *
hh:mm:ss * USE, DUPLICATION OR DISCLOSURE          *
hh:mm:ss * RESTRICTED BY GSA ADP SCHEDULE CONTRACT *
hh:mm:ss * WITH IBM CORP.                          *
hh:mm:ss *                                         *
hh:mm:ss * * TRADEMARK OF INTERNATIONAL BUSINESS   *
hh:mm:ss *   MACHINES                              *
hh:mm:ss ******************************************

hh:mm:ss HCPZCO6718I Using parm disk 1 on volume volid (device xxxx).
hh:mm:ss HCPZCO6718I Parm disk resides on cylinders xx through xx.
```

```
    ⋮
```

You may receive an informational message, HCPISU951I, about volumes not mounted. If you are not using those volume labels, ignore this message.

**Attention:** If you receive informational message HCPIIS954I, you have duplicate volumes with the same label. You must return to the first-level CP environment and detach the duplicate volumes. Then go back to substep 1 on page 37.

```
hh:mm:ss Start ((Warm|Force|COLD|CLEAN) (DRain)
          (DIsable) (NODIRect) (NOAUTOlog)) or (SHUTDOWN)
```

**cold drain noautolog**

Because there is no data or accounting information to recover, use **cold drain** to request a cold start. Use **noautolog** at this point because you cannot have the servers and all user IDs logged on.

```
NOW hh:mm:ss {EST|EDT} weekday yyyy-mm-dd
Change TOD clock (yes|no)
```

**no**

9. CP logs on the primary system operator (user ID OPERATOR).

```
hh:mm:ss The directory on volume 430RES at address nnnn
           has been brought online.
hh:mm:ss HCPWRS2513I
hh:mm:ss HCPWRS2513I Spool files available    nnnn
```

**Note:** Depending on the type of spool files available, you may receive the following prompt:

**+———Spool Files Prompt———+**

```
hh:mm:ss HCPWRS2513I
hh:mm:ss HCPWRS2513I Spool files on offline volumes      {nnnn|NONE}
hh:mm:ss HCPWRS2513I Spool files with I/O errors         {nnnn|NONE}
hh:mm:ss HCPWRS2513I Spool files with control errors     {nnnn|NONE}
hh:mm:ss HCPWRS2513I Spool files to be discarded         {nnnn|NONE}
hh:mm:ss HCPWRS2513I                                      -------
hh:mm:ss HCPWRS2513I Total files to be deleted            nnnn
hh:mm:ss HCPWRS2511A
hh:mm:ss HCPWRS2511A Spool files will be deleted because of
                      COLD start.
hh:mm:ss HCPWRS2511A No files have been deleted yet.


hh:mm:ss HCPWRS2511A To continue COLD start and delete files,
                       enter GO.
hh:mm:ss HCPWRS2511A To stop COLD start without deleting
                       files, enter STOP.
```

**go**

Here the system gives you an opportunity to stop the cold start and save your spool files. You do not need to save any spool files at this time; answer **go**.

**+———End of Spool Files Prompt———+**

```
hh:mm:ss HCPWRS2512I Spooling initialization is complete.
hh:mm:ss DASD nnnn dump unit CP IPL pages nnnn
hh:mm:ss HCPWED876I The processor controller will not notify VM prior to
hh:mm:ss HCPWED876I deactivation. To ensure guest integrity, issue the VM
hh:mm:ss HCPWED876I SHUTDOWN command before deactivating it.
hh:mm:ss HCPAAU2700I System gateway ZVMV4R30 identified.
z/VM Version 4 Release 3.0, Service Level 0000 (64-bit),
built on IBM Virtualization Technology
hh:mm:ss There is no logmsg data
hh:mm:ss FILES:   NO RDR,   NO PRT,   NO PUN
hh:mm:ss LOGON AT hh:mm:ss EDT DAY mm/dd/yy
hh:mm:ss GRAF  nnnn LOGON  AS  OPERATOR USERS = n
hh:mm:ss HCPIOP952I nnnnM system storage
hh:mm:ss FILES: nnnnnnnn RDR, nnnnnnnn PRT,      NO PUN
```

10. Disconnect from the OPERATOR user ID.

    **disconnect**

    ```
    DISCONNECT AT hh:mm:ss {EST|EDT} weekday mm/dd/yy

    Press enter or clear key to continue
    ENTER
    ```

**What to Do Next**

Go to Chapter 4, “Load the System DDR” on page 41.

# Chapter 4. Load the System DDR

**In this chapter, you will:**

- Use INSTDIR to generate the system directory
- Use INSTVM to load your new system
- Use INSTDEF to complete processing and to optionally move products to SFS
- Use SERVICE and PUT2PROD to install RSU service
- Configure TCP/IP
- Load new CPLOAD module
- Back up system to tape.

# Step 1. Run INSTDIR and DIRONLIN

**In this step, you will:**

- Run INSTDIR to build the directory for your system
- Run DIRONLIN to bring the new directory online.

1. Log on to the MAINT user ID.

   **ENTER** The default password for MAINT is MAINT.

   **logon maint**

   ```
   z/VM Version 4 Release 3.0, Service Level 0000 (64-bit),
   built on IBM Virtualization Technology
   There is no logmsg data
   FILES:   NO RDR,   NO PRT,   NO PUN
   LOGON AT hh:mm:ss EDT DAY mm/dd/yy
   DMSIND2015W Unable to access the Y-disk. Filemode Y (19E)not accessed

   z/VM V4.3.0    yyyy-mm-dd hh:mm
   ENTER

   DMSACP113S B(5E5) not attached or invalid device address
   DMSACP113S D(51D) not attached or invalid device address
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

2. Run INSTDIR to build USER DIRECT for your installation.

   **instdir**

   ```
   DASD 0199 DETACHED

   The minidisks with the END option specified in this directory will not be includ
   ed in the following DISKMAP file.

   File USER DISKMAP A has been created.
   CPRELEASE request for disk A scheduled.
   HCPZAC6730I CPRELEASE request for disk A completed.
   HCPIND8392I INSTDIR EXEC ENDED SUCCESSFULLY
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

3. Run DIRONLIN to bring the new USER DIRECT directory online.

   **dironlin**

   ```
   HCPZAC6730I CPRELEASE request for disk B completed.
   z/VM USER DIRECTORY CREATION PROGRAM - VERSION 4 RELEASE 3.0
   EOJ DIRECTORY UPDATED AND ON LINE
   HCPZAC6732I CPACCESS request for MAINT's 0CF1 in mode A completed.
   HCPZAC6732I CPACCESS request for MAINT's 0CF2 in mode B completed.
   HCPDOL8391I DIRONLIN EXEC ENDED SUCCESSFULLY
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

4. Log off of the MAINT user ID.

   **logoff** This is required to pick up the new or changed directory links.

   ```
   CONNECT= nn:nn:nn VIRTCPU= nnn:nn.nn TOTCPU= nnn:nn.nn
   LOGOFF AT hh:mm:ss {EST|EDT} weekday mm/dd/yy

   Press enter or clear key to continue
   ENTER
   ```

# Step 2. Run INSTVM EXEC

**In this step, you will:**

- Run INSTVM to load the items from the z/VM System DDR.

**Notes:**

1. On all panels, CP and CMS commands can be issued from the panel command line. Line end characters, for example #, cannot be used.
2. Running the INSTVM EXEC requires a full screen terminal with at least 20 lines.

1. Log on to the MAINT user ID.

   **ENTER** — The default password for MAINT is MAINT.

   **logon maint**

   ```
   z/VM Version 4 Release 3.0, Service Level 0000 (64-bit),
   built on IBM Virtualization Technology
   There is no logmsg data
   FILES: nnnn RDR,   NO PRT,   NO PUN
   LOGON AT hh:mm:ss EDT DAY yyyy-mm-dd

   z/VM V4.3.0    yyyy-mm-dd hh:mm
   ```

   **ENTER**

   ```
   DMSACP112S B(5E5) device error
   DMSACP112S D(51D) device error

   Ready; T=n.nn/n.nn hh:mm:ss
   ```

   Message DMSACP112S is not a problem at this time.

2. Attach the tape drives, where the z/VM System DDR tapes are mounted, by **repeating** this step for **each** tape drive needed. Refer to the ***1st Level*** column in the **TAPE DRIVE SECTION** in the Installation Worksheet (Table 1 on page 10) for *tapeaddr*.

   **attach** *tapeaddr* ***** *vtapeaddr*

   ```
   TAPE tapeaddr ATTACHED TO MAINT vtapeaddr
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

   *tapeaddr* is the address in the ***1st Level*** column of the **TAPE DRIVE SECTION** in the Installation Worksheet (Table 1 on page 10).

   *vtapeaddr* is the virtual address where the tape drive will be attached. *vtapeaddr* must be attached at virtual addresses within the following ranges: 180 to 187 or 288 to 28F.

3. If the tapes are not already mounted, mount the z/VM System DDR tapes on the tape drives. If you are using 3480 or 3490 tapes, do not mount volume 1.
4. Run INSTVM to install the z/VM System DDRs.

   If installing from CD-ROM, enter:

   **instvm cd**

   If installing from 3590 tape, enter:

   **instvm 3590**

   Otherwise, enter:

   **instvm**

## Run INSTVM EXEC

The LOAD DEVICE MENU panel displays after issuing the INSTVM command.

```
                        LOAD DEVICE MENU

                    MEDIA SELECTED IS: media

                  MOUNT VOLUME          VADDR
                       2                ____________
                       3                ____________
                       4                ____________
                       5                ____________
                       6                ____________
                       7                ____________
                       8                ____________




====>
 PF1 = HELP        PF3 = QUIT       PF5 = LOAD          PF12 = RETURN
```

5. Complete the LOAD DEVICE MENU panel.

   **Note:** This panel shows you which tape volumes you need based on the items you are loading. You will be prompted if a tape volume needs changing.

   a. Check the **MEDIA SELECTED IS:** field. This is a required field that will contain either TAPE, 3590, or CD depending on the parameter used to call the INSTVM exec. If the *media* specified is not correct, press **PF3** to quit and run the INSTVM exec with the correct parameter.

   b. Type in the tape drive addresses where each volume of the z/VM System DDR is mounted.

      Each volume must have an associated tape drive. If you use one tape drive or tape stacker for multiple volumes, you must enter that tape drive address next to each volume for which it will be used.

      **Note:** If you use a unique tape drive for each volume, or use a tape stacker in automatic mode, the tapes will be loaded without interruption. If you must use one tape drive for multiple volumes, you will be prompted when a tape volume needs to be changed.

6. Press **PF5** to load.

   **PF5**

   The load starts with the following system messages:

   **Note:** You will not see the optional item messages if you chose not to load those items.

```
HCPWIN8388I  CHECKING STATUS OF DRIVES
HCPWIN8381I  CHECKING TAPE VOLUME NUMBER FOR DRIVE vaddr
```

   You will receive this message for each tape drive you are using. The screen will clear after these messages are displayed.

```
HCPWIN8371I  LOADING BASE
HCPWIN8371I  LOADING FILEPOOL  ...
HCPWIN8371I  LOADING CP, DV SOURCE ...
HCPWIN8371I  LOADING CMS, REXX SOURCE ...
HCPWIN8371I  LOADING VMSES/E SOURCE ...
⋮
```

The screen will clear for a few seconds after these messages are displayed.

```
HCPWIN8428I  TOTAL PERCENT LOADED -> nn%
```

*volid* is the volume identifier.

```
HCPWIN8380I  RESTORING MINIDISK nnn TO volid

HCPDDR725D SOURCE DASD DEVICE WAS (IS) LARGER THAN OUTPUT DEVICE
RESTORING volid
DATA DUMPED   mm/dd/yy AT hh.mm.ss  GMT FROM volid RESTORED TO SCRATCH
INPUT CYLINDER EXTENTS      OUTPUT CYLINDER EXTENTS
      START       STOP         START        STOP
   nnnnnnnn   nnnnnnnn      nnnnnnnn    nnnnnnnn

END OF RESTORE
 BYTES RESTORED nnnnnnnn
END OF JOB
```

**+———Tape prompt———+**

```
.
.
.

HCPWIN8433I  INSTALL PROCESSING CONTINUES
HCPWIN8372A  PLEASE MOUNT VOLUME n ON TAPE DRIVE
             vaddr THEN PRESS ENTER TO CONTINUE
HCPWIN8381I  CHECKING TAPE VOLUME NUMBER FOR DRIVE
             vaddr
```

If you need to mount a tape volume, you will receive these messages.

**+———End of Tape prompt———+**

```
HCPWIN8434I item HAS BEEN SUCCESSFULLY LOADED.
```

This message is repeated for each item loaded.

```
.
.
.
HCPWSR8409I GENERATING SOFTWARE INVENTORY FILES
HCPWSR8413I GENERATING SOFTOWARE INVENTORY FILES COMPLETED
HCPWSR8413I UPDATE OF VM SYSSUF TABLE COMPLETED
HCPPLD8392I POSTLOAD EXEC COMPLETED SUCCESSFULLY
```

**+———Messages received if FILEPOOL was loaded———+**

```
DMSACC724I 2CC replaces E (2CC)
AUTO LOGON  ***       VMSERVS  USERS = n
HCPCLS6056I XAUTOLOG information for VMSERVS: The IPL command is verified by the IPL
  command processor.
VMSERVS : z/VM V4.3.0    yyyy-mm-dd hh:mm
VMSERVS : DMSACP723I B (193) R/O
VMSERVS : DMSWFV1117I FILESERV processing begun at hh:mm:ss on dd month yyyy
VMSERVS : DMSWFV1121I VMSERVS DMSPARMS A1 will be used for FILESERV processing
VMSERVS : DMSWFV1121I VMSYS POOLDEF A1 will be used for FILESERV processing

AUTO LOGON  ***       VMSERVU  USERS = n
HCPCLS6056I XAUTOLOG information for VMSERVU: The IPL command is verified by the IPL
  command processor.
VMSERVU : z/VM V4.3.0    yyyy-mm-dd hh:mm
VMSERVU : DMSACP723I B (193) R/O
VMSERVU : DMSWFV1117I FILESERV processing begun at hh:mm:ss on dd month yyyy
VMSERVU : DMSWFV1121I VMSERVU DMSPARMS A1 will be used for FILESERV processing
VMSERVU : DMSWFV1121I VMSYSn POOLDEF A1 will be used for FILESERV processing
VMSERVU : DMS5BB3045I Ready for operator communications
```

## Run INSTVM EXEC

```
AUTO LOGON  ***       VMSERVR  USERS = n
HCPCLS6056I XAUTOLOG information for VMSERVR: The IPL command is verified by the IPL
  command processor.
VMSERVR : DMS5BB3045I Ready for operator communications
VMSERVR : z/VM V4.3.0    yyyy-mm-dd hh:mm
VMSERVR : DMSACP723I B (193) R/O
VMSERVR : DMSWFV1117I FILESERV processing begun at hh:mm:ss on dd month yyyy
VMSERVR : DMSWFV1121I VMSERVR DMSPARMS A1 will be used for FILESERV processing
VMSERVR : DMSWFV1121I VMSYSn POOLDEF A1 will be used for FILESERV processing
VMSERVR : DMS6LG3335I CRR log recovery begins at mm-dd-yy hh:mm:ss
VMSERVR : DMS6LG3335I CRR log recovery completes at mm-dd-yy hh:mm:ss
VMSERVR : DMS5BB3045I Ready for operator communications
```

**+———End of Messages received if FILEPOOL was loaded———+**

**+———Messages received for each file pool if SMALL FILEPOOL was loaded———+**

```
DASD 0804 DETACHED
AUTO LOGON  ***       VMSERVn  USERS = n
HCPCLS6056I XAUTOLOG information for VMSERVn: The IPL command is verified by the IPL
  command processor.
VMSERVn : DMSACC724I 19E replaces Y (19E)
VMSERVn : DMSACP723I Y (19E) R/O
VMSERVn : z/VM V4.3.0    yyyy-mm-dd hh:mm
VMSERVn : DMSWSP100W Shared S-STAT not available
VMSERVn : DMSWSP100W Shared Y-STAT not available
VMSERVn : DMSACP723I B (193) R/O
VMSERVn : DMSWFV1117I FILESERV processing begun at hh:mm:ss on dd month yyyy
VMSERVn : DMSWFV1121I VMSERVn DMSPARMS A1 will be used for FILESERV processing
VMSERVn : DMS4PD3400I Initializing begins for DDNAME = CONTROL
VMSERVn : DMS4PD3400I Initializing ends for DDNAME = CONTROL
VMSERVn : DMS4PD3400I Initializing begins for DDNAME = MDK00001
VMSERVn : DMS4PD3400I Initializing ends for DDNAME = MDK00001
VMSERVn : DMS4PD3400I Initializing begins for DDNAME = MDK00002
VMSERVn : DMS4PD3400I Initializing ends for DDNAME = MDK00002
VMSERVn : DMS4PG3404W File pool limit of 2 minidisks has been reached
VMSERVn : DMS4PD3400I Initializing begins for DDNAME = LOG1
VMSERVn : DMS4PD3400I Initializing ends for DDNAME = LOG1
VMSERVn : DMS4PD3400I Initializing begins for DDNAME = LOG2
VMSERVn : DMS4PD3400I Initializing ends for DDNAME = LOG2
VMSERVn : DMS6LB3336I Initialization begins for the CRR log minidisks
VMSERVn : DMS6LB3336I Initialization completes for the CRR log minidisks
VMSERVn : DMS5FD3032I File pool server has terminated
VMSERVn : DMSWFV1120I File VMSYSn POOLDEF A1 created or replaced
VMSERVn : DMSWFV1117I FILESERV processing ended at hh:mm:ss on dd month yyyy
RDR FILE 0010 SENT FROM VMSERVn  PUN WAS 0001 RECS 0004 CPY  001 A NOHOLD NOKEEP
VMSERVn : File FILESERV VALID A3 sent to MAINT at ZVMV4R30 on mm/dd/yy hh:mm:ss
VMSERVn : Ready; T=n.nn/n.nn hh:mm:ss

HCPQCS150A User VMSERVn has issued a VM read
VMSERVn : CONNECT= hh:mm:ss VIRTCPU= 000:00.90 TOTCPU= 000:02.12
VMSERVn : LOGOFF AT hh:mm:ss EDT WEDNESDAY mm/dd/yy BY MAINT
USER DSC   LOGOFF AS  VMSERVn  USERS = 2     FORCED BY MAINT
DASD 0804 DETACHED
AUTO LOGON  ***       VMSERVn  USERS = 3
HCPCLS6056I XAUTOLOG information for VMSERVn: The IPL command is verified by the IPL
  command processor.
VMSERVn : DMSACC724I 19E replaces Y (19E)
VMSERVn : DMSACP723I Y (19E) R/O
VMSERVn : z/VM V4.3.0    yyyy-mm-dd hh:mm
VMSERVn : DMSWSP100W Shared S-STAT not available
VMSERVn : DMSWSP100W Shared Y-STAT not available
VMSERVn : DMSACP723I B (193) R/O
VMSERVn : DMSWFV1117I FILESERV processing begun at hh:mm:ss on dd month yyyy
VMSERVn : DMSWFV1121I VMSERVn DMSPARMS A1 will be used for FILESERV processing
VMSERVn : DMSWFV1121I VMSYSn POOLDEF A1 will be used for FILESERV processing
```

```
VMSERVn : DMS6LG3335I CRR log recovery begins at mm-dd-yy hh:mm:ss
VMSERVn : DMS6LG3335I CRR log recovery completes at mm-dd-yy hh:mm:ss
VMSERVn : DMS5BB3045I Ready for operator communications
```

**+———End of Messages received for each file pool if SMALL FILEPOOL was loaded———+**

```
HCPIFP8392I INSTPOOL EXEC ENDED SUCCESSFULLY
HCPIVM8392I INSTVM EXEC ENDED SUCCESSFULLY
Ready; T=n.nn/n.nn hh:mm:ss
```

# Step 3. Run INSTDEF EXEC

**In this step, you will:**

- Move items to SFS
- Select the system default language
- Move OpenExtensions Shell and Utilities into BFS directories
- Complete installation cleanup.

1. Run INSTDEF.

   **instdef**

```
                          ***  z/VM INSTDEF MENU  ***

 Mark items selected to be moved into SFS with an S in the Move to SFS column
 and those selected not to be moved into SFS with an N .

Move to SFS   Component  Move to SFS   Component  Move to SFS   Component
-----------   ---------  -----------   ---------  -----------   ---------
     N        AVS             N        GCS             N        TSAF
     N        LE370           N        RSCS            N        TCPIP
     N        OSA             N        TSM             N        ICKDSF
     N        RTM             N        PRF             N        DIRM
     N        RACF

 System Default Language (AMENG, UCENG, KANJI, GERMAN)   AMENG

 Move Shell & Utilities into the IBM default Byte File System? (Y/N)  Y


     PF1 = HELP   PF3/PF12 = QUIT   PF5 = Process   ENTER = Refresh
```

   a. If you are moving items into SFS, change the “N” to “S” for each item to be moved.

      **Note:** To move items into SFS, you must have loaded the FILEPOOL item.

   b. If you want a different system default language, change “AMENG” to another language.

   c. If you do not want to move Shell & Utilities in BFS, change the “Y” to “N”.

      **Note:** To move Shell & Utilities into BFS, you must have loaded either the FILEPOOL or SMALL FILEPOOL item.

   d. Press **PF5** to process.

```
HCPDFX8475I THE ITEMS YOU SELECTED TO MOVE TO SFS ARE:
       AVS GCS TSAF LE370 RSCS TCPIP OSA TSM ICKDSF RTM PRF DIRM RACF

       THE ITEMS YOU SELECTED NOT TO MOVE TO SFS ARE:
         NONE


       THE LANGUAGE IDENTIFIER IS:
        AMENG

       MOVE SHELL & UTILITIES INTO IBM DEFAULT BFS:
        YES
```

```
HCPDFX8338I  NOW EXECUTING THE MOVE TO SFS STEP
HCPWMV8456I  PROCESSING COMPONENT AVS
HCPWMV8453I  MOVE OF AVS COMPONENT TO SFS COMPLETED SUCCESSFULLY
HCPWMV8467I  BOTH AVS AND TSAF MUST BE MOVED TO SFS
             BEFORE THE DISK SPACE CAN BE RECLAIMED
HCPDRX8357W  THE COMMAND CMS MOVE2SFS AVS (RECLAIM COMPLETED WITH RC=4 PROCESSING CONTINUES

HCPWMV8456I  PROCESSING COMPONENT GCS
HCPWMV8453I  MOVE OF GCS COMPONENT TO SFS COMPLETED SUCCESSFULLY
HCPWMV8465I  THE FOLLOWING MINIDISKS FOR COMPONENT GCS
             HAVE BEEN RECLAIMED:
             6A6 6A4 6A2 6D2 6B2
HCPWMV8392I  MOVE2SFS EXEC ENDED SUCCESSFULLY
HCPDFX8341I  THE COMMAND CMS MOVE2SFS GCS (RECLAIM COMPLETED SUCCESSFULLY

HCPWMV8456I  PROCESSING COMPONENT TSAF
HCPWMV8453I  MOVE OF TSAF COMPONENT TO SFS COMPLETED SUCCESSFULLY
HCPWMV8465I  THE FOLLOWING MINIDISKS FOR COMPONENT TSAF
             HAVE BEEN RECLAIMED:
             7A6 7A4 7A2 7D2 7B2
HCPWMV8392I  MOVE2SFS EXEC ENDED SUCCESSFULLY
HCPDFX8341I  THE COMMAND CMS MOVE2SFS TSAF (RECLAIM COMPLETED SUCCESSFULLY

HCPWMV8456I  PROCESSING COMPONENT LE370
HCPWMV8453I  MOVE OF LE370 COMPONENT TO SFS COMPLETED SUCCESSFULLY
HCPWMV8465I  THE FOLLOWING MINIDISKS FOR COMPONENT LE370
             HAVE BEEN RECLAIMED:
             2B2 2C2 2D2 2A6 2A2
HCPWMV8392I  MOVE2SFS EXEC ENDED SUCCESSFULLY
HCPDFX8341I  THE COMMAND CMS MOVE2SFS LE370 (RECLAIM COMPLETED SUCCESSFULLY

HCPWMV8456I  PROCESSING COMPONENT RSCS
HCPWMV8453I  MOVE OF RSCS COMPONENT TO SFS COMPLETED SUCCESSFULLY
HCPWMV8465I  THE FOLLOWING MINIDISKS FOR COMPONENT RSCS
             HAVE BEEN RECLAIMED:
             2B2 2C2 2D2 2A6 2A2 29D 502 402 406 2B3
HCPWMV8392I  MOVE2SFS EXEC ENDED SUCCESSFULLY
HCPDFX8341I  THE COMMAND CMS MOVE2SFS RSCS (RECLAIM COMPLETED SUCCESSFULLY

HCPWMV8456I  PROCESSING COMPONENT TCPIP
HCPWMV8453I  MOVE OF TCPIP COMPONENT TO SFS COMPLETED SUCCESSFULLY
HCPWMV8465I  THE FOLLOWING MINIDISKS FOR COMPONENT TCPIP
             HAVE BEEN RECLAIMED:
             2B2 2C4 2D2 2A6 2A2 2B3
HCPWMV8392I  MOVE2SFS EXEC ENDED SUCCESSFULLY
HCPDFX8341I  THE COMMAND CMS MOVE2SFS TCPIP (RECLAIM COMPLETED SUCCESSFULLY

HCPWMV8456I  PROCESSING COMPONENT OSA
HCPWMV8453I  MOVE OF OSA COMPONENT TO SFS COMPLETED SUCCESSFULLY
HCPWMV8465I  THE FOLLOWING MINIDISKS FOR COMPONENT OSA
             HAVE BEEN RECLAIMED:
             2B2 2C2 2D2 2A6 2A2 100 300 200 400
HCPWMV8392I  MOVE2SFS EXEC ENDED SUCCESSFULLY
HCPDFX8341I  THE COMMAND CMS MOVE2SFS OSA (RECLAIM COMPLETED SUCCESSFULLY

HCPWMV8456I  PROCESSING COMPONENT TSM
HCPWMV8453I  MOVE OF TSM COMPONENT TO SFS COMPLETED SUCCESSFULLY
HCPWMV8465I  THE FOLLOWING MINIDISKS FOR COMPONENT TSM
             HAVE BEEN RECLAIMED:
             2B2 2D2 2A6 2A2
HCPWMV8392I  MOVE2SFS EXEC ENDED SUCCESSFULLY
HCPDFX8341I  THE COMMAND CMS MOVE2SFS TSM (RECLAIM COMPLETED SUCCESSFULLY

HCPWMV8456I  PROCESSING COMPONENT ICKDSF
HCPWMV8453I  MOVE OF ICKDSF COMPONENT TO SFS COMPLETED SUCCESSFULLY
HCPWMV8465I  THE FOLLOWING MINIDISKS FOR COMPONENT ICKDSF
             HAVE BEEN RECLAIMED:
             2B2 2C2 2D2 2A6 2A2 29E 29D
HCPWMV8392I  MOVE2SFS EXEC ENDED SUCCESSFULLY
HCPDFX8341I  THE COMMAND CMS MOVE2SFS ICKDSF (RECLAIM COMPLETED SUCCESSFULLY
```

## Run INSTDEF EXEC

```
HCPWMV8456I  PROCESSING COMPONENT RTM
HCPWMV8453I  MOVE OF RTM COMPONENT TO SFS COMPLETED SUCCESSFULLY
HCPWMV8465I  THE FOLLOWING MINIDISKS FOR COMPONENT RTM
             HAVE BEEN RECLAIMED:
             2A2 2A6 2B2 2C2 2C4 2D2 400 401 1CC CCC
HCPWMV8392I  MOVE2SFS EXEC ENDED SUCCESSFULLY
HCPDFX8341I  THE COMMAND CMS MOVE2SFS RTM (RECLAIM COMPLETED SUCCESSFULLY

HCPWMV8456I  PROCESSING COMPONENT PRF
HCPWMV8453I  MOVE OF PRF COMPONENT TO SFS COMPLETED SUCCESSFULLY
HCPWMV8465I  THE FOLLOWING MINIDISKS FOR COMPONENT PRF
             HAVE BEEN RECLAIMED:
             2A2 2A6 2B2 2C2 2C4 2D2 597 497 1CC CCC 192
HCPWMV8392I  MOVE2SFS EXEC ENDED SUCCESSFULLY
HCPDFX8341I  THE COMMAND CMS MOVE2SFS PRF (RECLAIM COMPLETED SUCCESSFULLY

HCPWMV8456I  PROCESSING COMPONENT DIRM
HCPWMV8453I  MOVE OF DIRM COMPONENT TO SFS COMPLETED SUCCESSFULLY
HCPWMV8465I  THE FOLLOWING MINIDISKS FOR COMPONENT DIRM
             HAVE BEEN RECLAIMED:
             2A2 2A6 2B2 2C2 2C4 2D2 29D 29E 2B1 502
HCPWMV8392I  MOVE2SFS EXEC ENDED SUCCESSFULLY
HCPDFX8341I  THE COMMAND CMS MOVE2SFS DIRM (RECLAIM COMPLETED SUCCESSFULLY

HCPWMV8456I  PROCESSING COMPONENT RACF
HCPWMV8453I  MOVE OF RACF COMPONENT TO SFS COMPLETED SUCCESSFULLY
HCPWMV8465I  THE FOLLOWING MINIDISKS FOR COMPONENT RACF
             HAVE BEEN RECLAIMED:
             2A2 2A6 2B2 2B3 2C2 2D2
HCPWMV8392I  MOVE2SFS EXEC ENDED SUCCESSFULLY
HCPDFX8341I  THE COMMAND CMS MOVE2SFS RACF (RECLAIM COMPLETED SUCCESSFULLY

HCPDFX8341I  INSTDEF FUNCTION 'MOVE TO SFS' COMPLETED SUCCESSFULLY



HCPDFX8338I  NOW EXECUTING 'MOVE SHELL & UTILITIES TO BFS' STEP
RC=0 from EXEC OPENVM UNMOUNT/
HCPDFX8341I  INSTDEF FUNCTION 'MOVE TO BFS' STEP COMPLETED SUCCESSFULLY
HCPDFX8338I  NOW EXECUTING 'UPDATE SYSTEM LANGUAGE ID' STEP
CPRELEASE request for disk A scheduled.
HCPZAC6730I  CP RELEASE request for disk A completed.
HCPDFX8341I  INSTDEF FUNCTION 'CHANGE SYSTEM LANGID' COMPLETED SUCCESSFULLY
HCPDFX8338I  NOW EXECUTING 'REMOVAL OF MAINT'S 800 LINKS' STEP
HCPDFX8341I  INSTDEF FUNCTION 'REMOVE MAINT'S 800 LINKS' COMPLETED SUCCESSFULLY
HCPINP8392I  INSTDEF EXEC ENDED SUCCESSFULLY
Ready; T=n.nn/n.nn hh:mm:ss
```

# Step 4. Run SERVICE EXEC

**In this step, you will:**

- Run SERVICE to load the service files from the Recommended Service Upgrade (RSU) tapes.

1. Log on to the MAINT user ID if you are not already logged on.

   **ENTER** The default password for MAINT is MAINT.

   **logon maint**

   ⋮

   Ready; T=*n.nn*/*n.nn hh:mm:ss*

2. Attach the tape drive used for the RSU to MAINT as 181.

   **attach** *tapeaddr* ***** 181

   TAPE *tapeaddr* ATTACHED TO MAINT 181
   Ready; T=*n.nn*/*n.nn hh:mm:ss*

3. Mount the RSU on your tape drive.

   If the RSU has multiple volumes, either:
   - Stack the RSU volumes on 181, **or**
   - Attach another tape drive as 182, another as 183, ..., and then mount each volume.

4. IPL CMS.

   **ipl cms**

   z/VM V4.3.0 *yyyy-mm-dd hh:mm*
   **ENTER**
   Ready; T=*n.nn*/*n.nn hh:mm:ss*

5. Run SERVICE.

   **service**

   VMFSRV2760I SERVICE processing started
   ⋮
   VMFSRV2760I SERVICE processing completed successfully
   Ready; T=*n.nn*/*n.nn hh:mm:ss*

# Step 5. Run PUT2PROD EXEC

**In this step, you will:**

- Run PUT2PROD to place the product into production.

1. Log on to the MAINT user ID if you are not already logged on.

   **ENTER logon maint** The default password for MAINT is MAINT.

   ```
   ⋮
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

2. IPL CMS.

   **ipl cms**

   ```
   z/VM V4.3.0    yyyy-mm-dd hh:mm
   ENTER
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

3. Run PUT2PROD.

   **put2prod**

   ```
   VMFP2P2760I PUT2PROD processing started
   ⋮
   VMFP2P2760I PUT2PROD processing completed successfully
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

# Step 6. Shutdown and Re-IPL Your System

**In this step, you will:**

- Shutdown your z/VM Version 4 Release 3.0 system
- Re-IPL your z/VM Version 4 Release 3.0 system using the new CP nucleus.

1. Shutdown and re-IPL the z/VM Version 4 Release 3.0 system.

```
shutdown reipl
SYSTEM SHUTDOWN STARTED
Ready; T=n.nn/n.nn hh:mm:ss
```

This message is displayed on all enabled consoles.

**+———First-Level Only———+**

The real system console shows disabled PSW wait state.

**+———End of First-Level Only———+**

```
HCPWRP9277I SYSTEM TERMINATION COMPLETE,
             ATTEMPTING RESTART
```

This will appear on the operator's console.

2. The IPL of your z/VM system continues:

```
hh:mm:ss HCPWRP9277I SYSTEM TERMINATION COMPLETE.
          ATTEMPTING RESTART
hh:mm:ss z/VM SYSTEM RESTART FROM SHUTDOWN REIPL
hh:mm:ss z/VM V4 R3.0
          SERVICE LEVEL nnnn (mode)

hh:mm:ss SYSTEM NUCLEUS CREATED ON yyyy-mm-dd AT hh:mm:ss,
          LOADED FROM 430RES
hh:mm:ss ******************************************
hh:mm:ss * LICENSED MATERIALS - PROPERTY OF IBM*   *
hh:mm:ss * 5739-A03 (C) COPYRIGHT IBM CORP. 1983,  *
hh:mm:ss * 2002. ALL RIGHTS RESERVED.              *
hh:mm:ss * US GOVERNMENT USERS RESTRICTED RIGHTS - *
hh:mm:ss * USE, DUPLICATION OR DISCLOSURE          *
hh:mm:ss * RESTRICTED BY GSA ADP SCHEDULE CONTRACT *
hh:mm:ss * WITH IBM CORP.                          *
hh:mm:ss *                                         *
hh:mm:ss * * TRADEMARK OF INTERNATIONAL BUSINESS   *
hh:mm:ss *   MACHINES                              *
hh:mm:ss ******************************************
hh:mm:ss HCPZCO6718I Using parm disk 1 on volume volid (device xxxx).
hh:mm:ss HCPZCO6718I Parm disk resides on cylinders xx through xx.
   ⋮
```

**Attention:** If you receive informational message HCPIIS954I, you have duplicate DASD with the same label and must correct this error before continuing.

```
hh:mm:ss The directory on volume 430RES at address nnnn
          has been brought online.
hh:mm:ss HCPWRS2513I
hh:mm:ss HCPWRS2513I Spool files available     {nnnn|none}


hh:mm:ss HCPWRS2512I Spooling initialization is complete.
   ⋮
```

```
hh:mm:ss FILES:     nnn RDR,     nnn PRT,     nnn PUN
hh:mm:ss LOGON AT hh:mm:ss {EST|EDT} weekday mm/dd/yy
   .
   .
   .

hh:mm:ss HCPIOP952I nnnnM system storage
hh:mm:ss FILES: nnnnnnn RDR, nnnnnnn PRT,      NO PUN
```

This message tells you the amount of storage available.

The FILES message here refers to operator spool files.

CP automatically disconnects from the primary system operator (user ID OPERATOR).

```
hh:mm:ss HCPUSO967I Disconnect OPERATOR - system
          restarted SHUTDOWN and system console
          not VM operator console
hh:mm:ss DISCONNECT AT hh:mm:ss {EST|EDT} weekday mm/dd/yy
hh:mm:ss Press enter or clear key to continue
 ENTER
```

Press enter or clear key to continue.

3. Log on to the MAINT user ID.

```
 ENTER
```

The password for MAINT is MAINT.

```
logon maint
   .
   .
   .
Ready; T=n.nn/n.nn hh:mm:ss
```

**Note**

If you want to use the System Administration Facility tools to create and manage Linux images on your z/VM system, you must initialize the System Administration Facility environment before making any modifications to your z/VM installation. Refer to the *z/VM: System Administration Facility* for more information.

## Step 7. Configure TCP/IP for an Initial Network Connection

You can optionally configure TCP/IP after you have completed your z/VM installation. The TCP/IP configuration created in this step provides only a basic IP network connection for your z/VM host. In addition, this configuration is suitable for installations that employ only static (as opposed to dynamic) network routes.

If you choose to configure a basic IP network connection for your z/VM host at this time, continue with this step. Otherwise, go to “Step 8. Back Up the Named Saved Systems and Segments” on page 58.

For details about any DTCIPW messages you may receive while running IPWIZARD, refer to *z/VM: TCP/IP Level 430 Messages and Codes*.

To establish a TCP/IP configuration that provides more comprehensive TCP/IP services, after you have completed your z/VM installation, see *z/VM: TCP/IP Level 430 Planning and Customization*.

**In this step, you will:**

- Configure TCP/IP.

1. Gather the information from the TCP/IP Configuration Worksheet (Table 3 on page 12).
2. Access minidisk 193.

   **access 193 e**

   ```
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

3. Run IPWIZARD.

   **ipwizard**

```
                  *** z/VM TCP/IP Configuration Wizard ***

The items that follow describe your z/VM host

User ID of VM TCP/IP Stack Virtual Machine:    TCPIP___

Host Name:    ____________________
Domain Name:  ________________________________________

DNS Addresses:  1) _______________  2) _______________  3) _______________

Gateway IP Address:  _______________

Interface Name:  _______________    Device Number:  ____
IP Address:      _______________    Subnet Mask:    _______________

Interface Type (Select one):
   _    QDIO                _    LCS               _    HiperSockets
   _    CLAW                _    CTC


         PF1 = HELP    PF3 = QUIT    PF8 = Continue   ENTER = Refresh
```

4. Using the information you gathered in the TCP/IP Configuration Worksheet (Table 3 on page 12), fill in the panel and press **PF8** to continue.
5. Depending on the interface type you selected, fill in one of the following panels and press **PF5** to process.

### Configure TCP/IP

For the **QDIO** interface:

```
                    *** QDIO Interface Configuration Panel ***

Network type (Select one):

   _    Ethernet            _    Token Ring

Port Name: ________

Router Type (Select one):

   _    Primary             _    Secondary           _    None

Maximum Transmission Unit (MTU) size: _____


 PF1 = HELP   PF3 = QUIT   PF5 = Process   PF7 = Backward   ENTER = Refresh
```

For the **LCS** interface:

```
                    *** LCS Interface Configuration Panel ***

Network type (Select one):

   _    Ethernet            _    Token Ring          _    FDDI

Port/Adapter Number _____

Maximum Transmission Unit (MTU) size: _____


 PF1 = HELP   PF3 = QUIT   PF5 = Process   PF7 = Backward   ENTER = Refresh
```

For the **HiperSockets** interface:

```
               *** HiperSockets Interface Configuration Panel ***

Maximum Frame Size (MFS): _____K









 PF1 = HELP   PF3 = QUIT   PF5 = Process   PF7 = Backward   ENTER = Refresh
```

For the **CLAW** interface:

```
                    *** CLAW Interface Configuration Panel ***

The items that follow must match the values configured on the CLAW device.

CLAW Host Name:     ________

CLAW Adapter Name:  ________

Maximum Transmission Unit (MTU) size:  _____


 PF1 = HELP   PF3 = QUIT   PF5 = Process   PF7 = Backward   ENTER = Refresh
```

For the **CTC** interface:

The write channel device numbers from which you can choose, *devnum1* and *devnum2*, automatically display in the CTC Interface Configuration Panel. *devnum1* is the device number specified on the main z/VM TCP/IP Configuration Wizard panel. *devnum2* is the device number specified on the main z/VM TCP/IP Configuration Wizard panel + 1.

```
                     *** CTC Interface Configuration Panel ***

Write Channel Device Number (Select one):

   _ devnum1     _ devnum2

Maximum Transmission Unit (MTU) size:  _____

Peer IP Address: _______________


 PF1 = HELP   PF3 = QUIT   PF5 = Process   PF7 = Backward   ENTER = Refresh
```

# Step 8. Back Up the Named Saved Systems and Segments

**In this step, you will:**

- Back up all the named saved systems and segments, including CMS, on tape.

1. Follow the First-Level or Second-Level steps that follow to attach a tape drive.

**+———First-Level Only———+**

   a. Attach a tape drive to MAINT.

**+———End of First-Level Only———+**

**+———Second-Level Only———+**

   a. Attach the tape drive to the first-level system.

   b. Attach the tape drive to MAINT on a second-level system.

**+———End of Second-Level Only———+**

2. Mount a scratch tape in write mode.

3. Spool the console.

```
spool console * start
```

4. Enter the SPXTAPE command to dump the named saved systems and segments to tape.

```
spxtape dump devno sdf all run
SPXTAPE DUMP   INITIATED ON VDEV devno
```

Substitute the address of the tape drive for the value *devno*. *devno* is the address you used to define the device. The operand RUN specifies that the SPXTAPE rewinds and unloads the tape after the operation.

```
Ready; T=n.nn/n.nn hh:mm:ss
DUMPING  devno  :         nnn  FILES,  PAGES      nnnn   nn% COMPLETE
   :
DUMPING  devno  :         nnn  FILES,  PAGES      nnnn   nn% COMPLETE
RDR FILE fileno1 SENT FROM MAINT    CON WAS fileno1 RECS nnnn CPY  001 T NOHOLD NOKEEP
SPXTAPE DUMP COMMAND COMPLETED  ON VDEV devno
TIME STARTED:        hh:mm:ss
TIME ENDED:          hh:mm:ss
TAPE COUNT:               nnn
FILES PROCESSED:          nnn
SPOOL PAGES:             nnnn
RDR FILE fileno2 SENT FROM MAINT    CON WAS fileno2 RECS nnnn CPY  001 T NOHOLD NOKEEP
```

The messages from SPXTAPE tell you that the files are being dumped to tape.

*fileno1* is the file number of the volume log file. The volume log file records information about the files processed by the SPXTAPE DUMP command that are associated with a particular tape volume.

*fileno2* is the file number of the command summary log file. The command summary log file records the progress and status of the SPXTAPE DUMP operation.

5. Store the tape for emergency use. If it is ever necessary, you can use this tape and the SPXTAPE command to restore the CMS system data file. For more information about the SPXTAPE command,

see the *z/VM: CP Command and Utility Reference*. For information on how to restore this tape to your system, see Appendix F, “Restore Your Named Saved Systems and Segments” on page 115.

# Step 9. Store a Backup Copy of the z/VM System on Tape

**In this step, you will:**

- Load the DDRXA utility to tape
- Use DDRXA to store a backup copy of the z/VM system on tape.

**Attention:** You must back up **all** your installation volumes in order to back up the z/VM system. You may wish to check your Directory Build Worksheet. This example requires a full pack minidisk be defined in the CP directory, USER DIRECT, for each volume you are dumping to tape.

1. Mount a scratch tape in write mode.
2. Attach the tape drive to MAINT at virtual device address 181.

   **attach** *devno* *** 181**

   The ATTACH command attaches the device (*devno*) to MAINT's virtual machine at virtual device address 181.

   ```
   TAPE     0181 ATTACHED
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

3. Access the 193 minidisk in read/write mode.

   **access 193 z**

   ```
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

4. Load the DDRXA utility to tape.

   **utility utiltape ddrxa**

   ```
   Rewind complete
   HCPWUT8317I MOVING IPL DDRXA TO TAPE
   HCPWUT8318I THE IPL DDRXA PROGRAM IS
               ON TAPE FILE NUMBER 1
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

5. Rewind the scratch tape on virtual device number 181.

   **rewind 181**

   ```
   Rewind complete
   ```

6. IPL the tape and answer the prompts from DDR. For information about DDRXA, see the *z/VM: CP Command and Utility Reference* and *z/VM: System Operation*.

   **ipl 181 clear**

   **Clear** is necessary. Do not omit it.

   Wait a few moments for DDRXA to prompt you. If a prompt does not appear, press the **Enter** key.

   ```
   z/VM DASD DUMP/RESTORE PROGRAM
   ENTER CARD READER ADDRESS OR CONTROL STATEMENTS
   ENTER:
   ```

   **sysprint cons**

   This first control statement tells DDRXA that you want program messages sent to your console.

   ```
   ENTER:
   ```

**input** *devno* **dasd** *volid*
ENTER:

The second control statement is the input control statement.

*devno* is the full pack minidisk address of the volume you are backing up. You must back up **all** your installation volumes.

The fullpack minidisk address for the default DASD are 123 (430RES), 124 (430W01), 125 (430W02), ....

By typing the word **dasd**, the device type (3390) is automatically identified by the DDR program.

*volid* is the label of this volume, for example 430RES.

**output 181 tape (compact**
ENTER:

This control statement specifies the device to which you are dumping the system.

By typing the word **tape**, the tape device type is automatically identified by the DDR program.

**dump all**

This command dumps the specified volume to the tape.

DUMPING *volid*
DUMPING DATA *mm/dd/yy*
AT *hh.mm.ss* GMT FROM *volid*

These are informational messages that will vary according to your use of device types. GMT means Greenwich Mean Time.

The exact cylinder extents vary according to the device type.

```
INPUT CYLINDER EXTENTS          OUTPUT CYLINDER EXTENTS
      START       STOP                START       STOP
   nnnnnnnn   nnnnnnnn             nnnnnnnn    nnnnnnnn

   ⋮
END OF DUMP
BYTES IN nnnnnnnnnn BYTES OUT nnnnnnnnnn
TRACKS NOT COMPACTED ON TAPE - nnnnnnnnnn
ENTER:
```

When DDRXA finishes dumping the volume, it prompts you with ENTER.

**Note:** When DDR encounters the end of a tape, it prompts you to mount the next tape, if required. If you are using the same tape drive, mount the next tape and DDR will continue. If you are using a different tape drive, issue the INPUT control statement to identify the tape drive and then issue the DUMP ALL statement.

7. If you have any more DASD volumes to back up, repeat the INPUT, OUTPUT, and DUMP ALL statements for each volume.
8. To end the program, press the **Enter** key.

   **ENTER**
   END OF JOB

9. Re-IPL CMS.

   **#cp ipl cms**
   z/VM V4.3.0 *yyyy-mm-dd hh:mm*
   **ENTER**

   Press **Enter** to return to the command line.

   Ready; T=*n.nn/n.nn hh:mm:ss*

### Store a Backup Copy of the z/VM System on Tape

For information on how to restore your system from tape, see Appendix E, “Restore the z/VM System Backup Copy” on page 113.

**What to Do Next**

Go to Chapter 5, “System Default Information” on page 65.

# Part 2. Post z/VM System DDR Installation Information

**In this part (after you have installed from the z/VM System DDR), you will:**

- Review the default values used when building the z/VM System DDR
- Customize or configure the preinstalled licensed products and features

> **Note**
> Some of the preinstalled product and features require additional installation steps. You **must complete** these steps for the product or feature to be completely installed.

- Review installation information about features and install features not preinstalled on the System DDR.

## Post System DDR Installation Information

# Chapter 5. System Default Information

**In this chapter, you will:**

- Review the various default values used when building the z/VM System DDR. This includes build information for the CMS, CP, and GCS components as well as CMS's saved segments.

# Step 1. CMS Defaults

**Information only:**
This step is for your information only.

1. The GUI workstation agents, along with their help files, are not shipped with z/VM. They are available with limited support from the VM Download Library:
   `http://www.ibm.com/s390/vm/download/`
2. Java and NetRexx™ reside on MAINT's 400 minidisk. The Java and NetRexx files are placeholders only. To receive the actual files, you must download them from the following website:
   `http://www.ibm.com/s390/vm/java/`
3. OpenExtensions Shell and Utilities and CMS Utilities Feature (CUF) are now part of the CMS component.

## Step 2. CP Defaults

**Information only:**
This step is for your information only.

1. The LOGO CONFIG and SYSTEM CONFIG files are located on the primary parm disk (CF1). A shadow of these files resides on the secondary parm disk (CF2). These files contain the system configuration data used by CP.
2. For detailed information about the CP system configuration function, CP nucleus options, and CP planning, see *z/VM: CP Planning and Administration*.
3. The CP nucleus on the z/VM System DDR is a module. The module resides on the parm disks (CF1, CF2, and CF3).
4. The CP nucleus is IPLed with the system default language, mixed case American English (AMENG), Uppercase English (UCENG), Kanji (KANJI), or German (GER), which was selected during installation.
5. The USER DIRECT file contains entries defining each virtual machine (user) permitted to log on to your system.

   The default machine mode definition for user IDs in the directory is XA. However, any SET MACHINE statement issued for a user ID overrides the default setting. The USER DIRECT file built during installation contains a SET MACH XA, SET MACH ESA, or SET MACH XC command for all user IDs.
6. For details on the SYSTEM NETID file, see Appendix D, “The SYSTEM NETID File” on page 111.
7. The z/VM System DDR contains system definition files with sample information and default parameters. You can modify the following files to define your system configuration.
   - The logo configuration file (LOGO CONFIG) defines both the logo that appears on your terminal screen when you log on your system and the logo that appears on separator pages for printers. This file also provides information to the system about status areas on the terminal screens.

     **Note:** Status areas are normally in the lower right side of the terminal and contain such informational messages as RUNNING, VM READ, CP READ, MORE..., and HOLDING.
   - The CP system control file (SYSTEM CONFIG) describes the system residence device (430RES) and various system parameters, defining the configuration of your system.
   - The real I/O configuration file (HCPRIO ASSEMBLE) contains only the RIOGEN macro.
8. If you are generating a CP nucleus with a preferred virtual machine refer to *z/VM: CP Planning and Administration* to determine how to set up your IPL parameters for SALIPL.
9. The USER DIRECT file contains a common profile section, PROFILE IBMDFLT. An INCLUDE statement for this profile has been added to each user ID that previously linked to the AMENG HELP disk (19D). The PROFILE IBMDFLT section contains a link to each HELP disk. Each user you add to the directory that needs access to a HELP disk must have an INCLUDE statement to the PROFILE IBMDFLT section.

# Step 3. GCS Defaults

**In this step, you will:**

- Review the defaults that went into building the GCS nucleus.

1. The GCS nucleus was built with mixed case American English (AMENG) as the system default language.
2. The GCS nucleus was built with a system name of GCS and is loaded at storage locations X'400'-X'5FF' and X'1000'-X'11FF'.
3. The GCS nucleus was also built with the following defaults:

| Default Item | Description |
|---|---|
| **Saved System Name** | GCS |
| **Authorized VM User IDs** | VTAM GCS MAINT NETVIEW OPERATNS RSCS AVSVM PDMREM1 PDMGRP4 SNALNKA PVMG NVAS IHVOPER CMEOSI NPM VSCS |
| **Saved System Information** | Recovery machine user ID: GCS |
| | User ID to receive storage dumps: OPERATNS |
| | GCS Trace Table Size: 16KB |
| | Common storage above 16MB line (YES or NO): YES |
| | Single user environment: no |
| | Maximum number of VM machines: 14 |
| | System ID: GCS |
| | Name of the VSAM segment: CMSVSAM |
| | Name of the BAM segment: CMSBAM |
| | GCS saved system is restricted: yes |
| | Trace table in private storage: yes |
| **Saved System links** | VTAM NETVSG00 |
| **User IDs needing VSAM storage** | NETVIEW NVAS CMEOSI |

# Step 4. Saved Segments on the z/VM System

**In this step, you will:**

- Review the saved segments that are installed on your system and their addresses.

1. CMS improves system performance and storage usage by placing heavily used execs in the CMS installation segment, CMSINST. CMSINST is a logical segment within the INSTSEG physical segment. If you want to add or delete an exec from CMSINST, you should identify the changes to VMSES/E using the procedure within the local modification example for CMSINST, found in the *z/VM: Service Guide*. A local modification allows VMSES/E to track the changes and to ensure the CMSINST segment is rebuilt when any of the execs in it are serviced.
2. The QUERY NSS ALL MAP command displays the saved segments and saved systems defined on your system.

   **query nss all map**

   Enter the QUERY NSS ALL MAP command to list all defined saved segments and their addresses.

```
.
.
.
FILE FILENAME FILETYPE MINSIZE  BEGPAG ENDPAG TYPE CL #USERS PARMREGS VMGROUP
nnnn CMS      NSS      0000256K 00000  0000D   EW  A  00000   00-15     NO
                                00020  00023   EW
                                00F00  013FF   SR
nnnn GCS      NSS      0000256K 00000  0000C   EW  R  00000   OMITTED   YES
                                00400  0044E   SR
                                0044F  0044F   SW
                                00450  005FF   SN
                                01000  0101A   SR
                                0101B  011FF   SN
nnnn CMSDOS   DCSS-M     N/A    00B00  00B0C   SR  A  00000   N/A       N/A
nnnn CMSBAM   DCSS-M     N/A    00B0D  00B37   SR  A  00000   N/A       N/A
nnnn DOSBAM   DCSS-S     N/A    00B00  00B37   --  A  00000   N/A       N/A
nnnn MONDCSS  CPDCSS     N/A    02100  028FF   SC  R  00000   N/A       N/A
nnnn GUICSLIB DCSS       N/A    01F00  01FFF   SR  A  00000   N/A       N/A
nnnn CMSFILES DCSS       N/A    01900  01BFF   SR  A  00000   N/A       N/A
nnnn SVM      DCSS       N/A    01900  019FF   SR  A  00000   N/A       N/A
nnnn CMSPIPES DCSS       N/A    01800  018FF   SR  A  00001   N/A       N/A
nnnn CMSVMLIB DCSS       N/A    01700  017FF   SR  A  00001   N/A       N/A
nnnn INSTSEG  DCSS       N/A    01400  016FF   SR  A  00001   N/A       N/A
nnnn HELPSEG  DCSS       N/A    00C00  00CFF   SR  A  00000   N/A       N/A
nnnn DOSINST  DCSS       N/A    00900  0090F   SR  A  00000   N/A       N/A
nnnn SCEE     DCSS       N/A    00900  009FF   SR  A  00000   N/A       N/A
nnnn SCEEX    DCSS       N/A    01A00  01EFF   SR  A  00000   N/A       N/A
nnnn NLSGER   DCSS       N/A    02000  020FF   SR  A  00000   N/A       N/A
nnnn NLSKANJI DCSS       N/A    02000  020FF   SR  A  00000   N/A       N/A
nnnn NLSUCENG DCSS       N/A    02000  020FF   SR  A  00000   N/A       N/A
nnnn NLSAMENG DCSS       N/A    02000  020FF   SR  A  00000   N/A       N/A
Ready; T=n.nn/n.nn hh:mm:ss
```

# Step 5. VMSERVS, VMSERVU, and VMSERVR File Pool Defaults

If you did not load FILEPOOL or SMALL FILEPOOL as part of the base z/VM (you are moving your existing SFS servers from a previous VM system), refer to the *z/VM: Migration Guide* for information describing how to move your SFS servers from a previous VM system.

**In this step, you will:**

- Review the defaults used to build the VMSERVS, VMSERVU, and VMSERVR.
- Refer to the *z/VM: CMS File Pool Planning, Administration, and Operation* manual for information describing the tailoring of SFS defaults.

The z/VM System DDR incorporates prebuilt file pools.

VMSYS

– Managed by the VMSERVS server machine

– If you chose to load FILEPOOL, the users enrolled are:
  - MAINT (for TSAF, AVS, and GCS)
  - P684096K (for RSCS)
  - XCHANGE (for RSCS)
  - 2VMVMV20 (for OSA/SF)
  - P688198H (for LE/370)
  - 4TCPIP30 (for TCP/IP)
  - 5654A09A (for TSM)
  - P684042H (for ICKDSF)
  - 4VMRTM10 (for RTM)
  - VMRTM (for RTM)
  - 4VMPRF10 (for VMPRF)
  - VMPRF (for VMPRF)
  - 4VMDVH10 (for DirMaint)
  - 5767002P (for RACF)

  If you chose to load SMALL FILEPOOL, the user enrolled is MAINT.

– If you chose to load FILEPOOL, you can move the following items to SFS:
  - GCS
  - TSAF
  - AVS
  - RSCS
  - TCP/IP
  - LE/370
  - OSA/SF
  - TSM
  - ICKDSF
  - RTM
  - VMPRF
  - DirMaint
  - RACF

If you chose to load SMALL FILEPOOL, you cannot move items into SFS because the VMSYS area is too small.

VMSYSU

- Managed by the VMSERVU server machine
- Enrolled MAINT in the VMSYSU file pool
- MAINT.SAMPLES directory exists with SFS sample files installed.

VMSYSR

- Managed by the VMSERVR server machine
- Coordinated Resource Recovery (CRR) file pool

Each of these file pools has two definition files associated with it:

- *filename* POOLDEF, which defines the configuration of the file pool. *filename* is the name of the file pool.
- *filename* DMSPARMS, which contains start-up parameters for the file pool server machine. *filename* is the user ID of the server machine.

Read the *z/VM: CMS File Pool Planning, Administration, and Operation* book for information and examples on tailoring these files and for information on BFS root directory definitions.

## VMSERVS, VMSERVU, and VMSERVR File Pool Defaults

# Chapter 6. Preinstalled Licensed Products and Features

**In this chapter, you will:**

- Review information about licensed products and features that are preinstalled on your system.

**Note**

**Some of the preinstalled product and features require additional installation steps. You must complete these steps for the product or feature to be completely installed.**

The z/VM System DDR was built incorporating the following licensed products and features.

*Table 9. Preinstalled Licensed Products and Features*

| Product name | Release level | Program number | Is product or feature installed disabled or enabled? | Do I need to configure before using the product or feature? |
|---|---|---|---|---|
| EREP | 3.5.0 | 5654-260 | Enabled | No |
| ICKDSF | 1.16.0 | 5684-042 | Enabled | No |
| LE | 1.8.0 | 5739-A03 | Enabled | No[6] |
| RSCS | 3.2.0 | 5684-096 | Disabled[3] | Yes[4] |
| TCP/IP | L430[1] | 5739-A03 | Enabled | Yes[4] |
| OSA/SF | FL220[2] | 5654-A17 | Enabled | Yes[4] |
| Tivoli Storage Manager | 3.1 | 5694-TSM | Disabled[3] | Yes[5] |
| RTM | FL410[2] | 5739-A03 | Disabled[3] | No[6] |
| VMPRF | FL410[2] | 5739-A03 | Disabled[3] | No[6] |
| DirMaint | FL410[2] | 5739-A03 | Disabled[3] | No[6] |
| RACF | 1.10.0 | 5740XXH | Disabled[3] | Yes[4] |

**Notes:**

1. L means level.
2. FL means function level.
3. This product or feature is not available for customer use unless you have a license for it. To use this product or feature, you must order it as documented in the appropriate program directory.
4. To use this product or feature, it must be configured. For configuration information, see the appropriate program directory.
5. For instructions on how to set up the Tivoli ADSM for VM servers and the CMS Admin Client on your system, refer to the *Tivoli ADSTAR Distributed Storage Manager for VM: QuickStart*.
6. This product can be customized.

For service instructions for a specific product or feature, refer to the appropriate program directory.

For detailed information about a product or feature, refer to its own documentation. See the “Bibliography” on page 163.

## EREP

The Environmental Record Editing and Printing Program (EREP) is a diagnostic application program that runs under the MVS™, VM, and VSE operating systems. The purpose of EREP is to help IBM service representatives maintain your data processing installations.

**Installation Instructions:** No additional installation instructions are required.

## ICKDSF

ICKDSF is a program you can use to perform functions needed for the installation, use, and maintenance of IBM DASD. You can also use it to perform service functions, error detection, and media maintenance.

**Installation Instructions:** No additional installation instructions are required.

## IBM Language Environment® VM

IBM Language Environment VM (LE) provides a common set of services in a single run-time environment while enhancing the run-time environment with additional support for emerging application development technologies, such as object-oriented, distributed client/server, and open standards.

**Installation Instructions:** The installation of LE is complete. To customize LE, refer to section “6.0 Installation Instructions” in the *IBM Language Environment VM Program Directory*.

## RSCS

VM Remote Spooling Communications Subsystem Networking (RSCS) lets z/VM users send messages, files and mail to co-workers at other systems on their TCP/IP, SNA, or non-SNA network. They can also use RSCS to print documents and issue commands on other systems.

RSCS uses z/VM spooling facilities to store and retrieve data. RSCS can transfer data to other systems (such as z/VM, z/OS™, OS/400®, VSE/ESA™, UNIX, Linux, and AIX/ESA®) that support Network Job Entry (NJE) protocols. NJE connectivity options include TCP/IP, SNA, ESCON®, channel to channel, and Binary Synchronous Communication.

RSCS also supports secure data transfer between z/VM spool and a system that is a workstation that supports Remote Job Entry (RJE) or Multi-leaving RJE (MRJE) protocols. RJE/MRJE connectivity options include SNA, and Binary Synchronous Communication.

RSCS provides the full range of all possible print service connectivity options. Instead of LPSERVE, the RSCS server may be chosen to provide an enhanced level of TCP/IP print support, including LPR and LPD. These services allow for intranet and internet print delivery for a system, and also accept print output from those networks. The ability to print data at a workstation printer in a transparent manner is available to end users regardless of how the printer is accessed.

The enhanced level of TCP/IP print support provided by RSCS (LPR, LPD, UFT, and TN3270E) may be used without obtaining a license for RSCS and enabling RSCS. All other RSCS features can only be used after obtaining a license and enabling RSCS.

**Installation Instructions:** The installation of RSCS is complete. To use RSCS, it must be enabled and configured. Refer to section “6.0 Installation Instructions” in the *RSCS Version 3 Release 2 Program Directory*.

## TCP/IP

TCP/IP (Transmission Control Protocol/Internet Protocol) enables z/VM customers to participate in a multivendor, open networking environment using the TCP/IP protocol suite for communications and interoperability. The applications provided in TCP/IP include the ability to transfer files, send mail, log on a remote host, allow access from any other TCP/IP node in the network, and perform other network client and server functions.

**Installation Instructions:** The installation of TCP/IP is complete. To use TCP/IP, it must be configured. Refer to section "6.0 Installation" in the *TCP/IP Level 430 Program Directory* for more information. If you used the IPWIZARD command to inititally configure TCP/IP, additional modifications may be required depending on the needs of your installation.

## OSA/SF

Open Systems Adapter Support Facility (OSA/SF) lets you customize the integrated Open Systems Adapter (OSA) hardware feature for the OSA modes, change the settable OSA port parameters, and obtain status about the OSA.

OSA/SF has an Operating System/2® (OS/2®) interface, which is called the OSA/SF Graphical User Interface (OSA/SF GUI).

Through the System Authorization Facility (SAF) interface of the system image on which it is running, OSA/SF lets you use the Resource Access Control Facility (RACF), or equivalent, to authorize or deny access to OSA/SF commands.

**Installation Instructions:** To **complete** the installation of OSA/SF, refer to section "6.0 Installation Instructions" in the *OSA/SF Program Directory* and follow the installation instructions.

## Tivoli Storage Manager

Tivoli Storage Manager is a client/server program that provides storage management to customers in a multivendor computer environment. Tivoli Storage Manager provides an automated centrally scheduled, policy-managed backup, archive, and space management facility for file servers and workstations.

**Installation Instructions:** Refer to *Tivoli ADSTAR Distributed Storage Manager for VM: QuickStart* for instructions on how to set up the Tivoli ADSM for VM servers and the CMS Admin Client on your system. The installation of Tivoli Storage Manager is complete.

## RTM

RTM (RealTime Monitor) is a realtime monitor and diagnostic tool used for monitoring, analyzing, and solving problems. You can also use RTM for installations of hardware and software to assist in validating the system components and establishing requirements for additional hardware or software.

**Installation Instructions:** The installation of RTM is complete. To use RTM, it must be enabled and configured. Refer to section "6.0 Installation Instructions" in the *RealTime Monitor Function Level 410 Program Directory*.

## VMPRF

VMPRF (VM Performance Reporting Facility) detects and diagnoses performance problems, analyzes system performance, and provides reports and trend data showing performance and usage of your z/VM system. The reports and history files produced by VMPRF include:

- System resource utilization, transaction response time, and throughput
- Resource utilization by the user ID

### Preinstalled Licensed Products and Features

- DASD activity and channel utilization.

**Installation Instructions:** The installation of VMPRF is complete. To use VMPRF, it must be enabled and configured. Refer to section “6.0 Installation Instructions” in the *VM Performance Reporting Facility Function Level 410 Program Directory*.

## DirMaint

DirMaint (Directory Maintenance Facility) provides support for all the z/VM directory statements. DirMaint also provides additional utilities to help manage minidisk assignments and allocations, and provides a level of security regarding command authorizations and password monitoring.

**Installation Instructions:** The installation of DirMaint is complete. To use DirMaint, it must be enabled and configured. Refer to section “6.0 Installation Instructions” in the *Directory Maintenance Facility Function Level 410 Program Directory*.

## RACF

Resource Access Control Facility (RACF) for VM is a product that works together with the existing system features of z/VM to provide improved data security for an installation.

**Installation Instructions:** The installation of RACF is complete. To use RACF, it must be enabled and configured. Refer to section “6.0 Installation Instructions” in the *Resource Access Control Facility Feature for VM Program Directory*.

# Chapter 7. Install z/VM Features

**In this chapter, you will:**

- Install z/VM features not shipped on the z/VM System DDR.

  If you want the z/VM features that are not shipped on the z/VM System DDR, you must separately order them. Refer to the *z/VM: General Information* for packaging and ordering information.

The features not shipped on the z/VM System DDR are optional. You only have to install the features you require. These features include:

- Restricted Source Annotated Assembler Listings for CP, CMS, REXX/VM, VMSES/E, GCS, and TSAF
- Programming Language/Cross Systems for System/370™ (PL/X-370) Source
- DFSMS/VM® Function Level 221

# Step 1. Install the z/VM Restricted Source Feature

The z/VM Restricted Source feature is shipped as a separate feature tape or as part of the Optional Features CD-ROM.

The z/VM Restricted Source Feature contains Assembler source code generated from z/VM PL/X source modules for the following components:

- CP
- CMS
- REXX/VM
- VMSES/E
- GCS
- TSAF

**In this step, you will:**

- Learn details about what the Restricted Source feature contains
- Install the Restricted Source feature.

1. Define a minidisk (*xxx*) to load these additional source files.
2. Use the **vmfplc2 load** command to receive these tape files in the order shown:

*Table 10. Order of Source Feature Tapes Received*

| Component | Tape File | 3590 or CD File | Minidisk Loaded To | # 3390 Cylinders (4KB block size) |
|---|---|---|---|---|
| Header (Volume 1) | 1 | 1 | | |
| CP | 2 | 2 | minidisk *xxx* | 162 |
| Header (Volume 2) | 1 | 3 | | |
| CMS | 2 | 4 | minidisk *xxx* | 445 |
| Header (Volume 3) | 1 | 5 | | |
| CMS (cont.)* | 2 | 6 | minidisk *xxx* | |
| Header (Volume 4) | 1 | 7 | | |
| CMS (cont.)* | 2 | 8 | minidisk *xxx* | |
| Header (Volume 5) | 1 | 9 | | |
| REXX/VM | 2 | 10 | minidisk *xxx* | 3 |
| VMSES/E | 3 | 11 | minidisk *xxx* | 2 |
| GCS | 4 | 12 | minidisk *xxx* | 25 |
| TSAF | 5 | 13 | minidisk *xxx* | 18 |

**Note:** * You need to include the CMS material from volume 3 and volume 4 on the same minidisk containing volume 2 material.

- The cylinders for the 3390 DASD were figured with a 4KB block size.

- The feature on CD-ROM or 3590 has one logical tape containing identical data to that included on the five restricted source tape volumes.
- All source files are loaded in **packed** format.
- The GCS file GCTOM $EXEC and all the macros listed within GCTOM $EXEC are for IBM use only. They are shipped on the Source Feature for reference purposes and are not supported.

# Step 2. Install the z/VM PL/X-370 Source Code Feature

The z/VM PL/X-370 source code feature is shipped as a separate feature tape or as part of the Optional Features CD-ROM.

This tape contains z/VM PL/X-370 source code files, distributed as restricted material of IBM, for the CP, CMS, and REXX/VM components.

**In this step, you will:**

- Learn details about what the z/VM PL/X-370 source code feature contains
- Install the z/VM PL/X-370 source code feature.

1. Increase the sizes of the following MAINT minidisks:

   Table 11 shows how many cylinders you must increase your minidisk in order to install the z/VM PL/X source code feature tape.

*Table 11. Minidisk Cylinder Size Increases Needed to Install PL/X-370 Source Code Feature Tape*

| Minidisk Address | # 3390 Cylinders (4KB block size) |
|---|---|
| 193/493 | 38 |
| 194 | 12 |
| 394 | 19 |
| 3B2 | 16 |
| 393 | 71 |

**Note:**

- The 194 and 394 disks are for CP only.
- The 3B2 and 393 disks are for CMS and REXX/VM only.
- The 193/493 disks are used by CP, CMS and REXX/VM.
  - 50% is needed for CP
  - 50% is needed for CMS and REXX/VM.
  - The cylinders for the 3390 DASD were figured with a 4KB block size.

2. Attach the tape drive to your user ID at virtual device number 181.

   If you are installing with CD-ROM, refer to the *Optical Media Attach/2 User's Guide* and the *Optical Media Attach/2 Technical Reference*.

   **attach** *tapeaddr* *** 181**

   ```
   TAPE tapeaddr ATTACHED TO userID 0181
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

   The ATTACH command attaches the device (*tapeaddr*) to your user ID's virtual machine at virtual device number 181.

3. Mount the z/VM PL/X-370 source code feature tape on the 181 tape drive.

4. Choose the components you wish to load (CP, CMS, REXX/VM). Enter the VMFREC command to load from the z/VM PL/X-370 source code feature tape one component at a time. Enter the VMFREC command for each component you choose to load.

   You will see the following messages for each component as it is loaded.

   **vmfrec ppf zvm** *compname* **(ins setup**

   *compname* is CP, CMS, or REXX.

```
VMFINS2760I VMFREC processing started
VMFINS2760I VMFSETUP processing started
VMFUTL2205I Minidisk|Directory Assignments:

            String    Mode  Stat  Vdev  Label/Directory
⋮
VMFSET2760I VMFSETUP processing completed successfully
VMFREC1852I Volume n of n of INS TAPE nnnn
⋮
VMFREC2760I VMFREC processing completed successfully
Ready; T=n.nn/n.nn hh:mm:ss
```

This block of messages is repeated for each component, noting that the minidisk assignments will change with each component.

5. Use the DETACH command to rewind, unload, and detach the tape.

**detach 181**

```
TAPE 0181 DETACHED
Ready; T=n.nn/n.nn hh:mm:ss
```

## Step 3. Install the DFSMS/VM Feature

DFSMS/VM is shipped as a separate feature tape or as part of the Optional Features CD-ROM.

For more information on installing and customizing DFSMS/VM, see the *DFSMS/VM Function Level 221 Program Directory*.

# Appendix A. Move Components to SFS Directories

This appendix describes how to move GCS, TSAF, AVS, LE/370, RSCS, OSA/SF, TCP/IP, TSM, ICKDSF, RTM, VMPRF, DirMaint, or RACF from minidisks to Shared File System directories. You can move these components after you have completed the installation of your z/VM 4.3.0 system.

**Note:** Once the components are moved to SFS directories, you **must** use the following components names with VMSES/E commands:

GCSSFS instead of GCS
TSAFSFS instead of TSAF
AVSSFS instead of AVS
LE370SFS instead of LE370
RSCSSFS instead of RSCS
TCPIPSFS instead of TCPIP
OSASFS instead of OSA
ADSMSFS instead of ADSM (for TSM)
ICKDSFSFS instead of ICKDSF
RTMSFS instead of RTM
VMPRFSFS instead of VMPRF
DIRMSFS instead of DIRM
RACFSFS instead of RACF

**In this appendix, you will:**

- Log on to the MAINT user ID on your new z/VM Version 4 Release 3.0 system
- Add MAINT links to the USER DIRECT file
- Ensure the VMSYS file pool is active
- Run MOVE2SFS to:
  - Create the SFS directories
  - Access the component's minidisks
  - Copy the minidisk files to the new SFS directory
  - Reclaim minidisks no longer needed.

1. Choose the components you now wish to move to SFS directories.
2. Log on to the MAINT user ID, if you are not already logged on.

   **ENTER**

   The default password for MAINT is MAINT.

   **logon maint**

   ```
   ...
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

3. IPL your System disk to release any previously accessed minidisks.

   **ipl 190 clear**

   **Clear** is necessary. Do not omit it.

   ```
      ⋮
   z/VM V4.3.0    yyyy-mm-dd hh:mm
   ```

   If you have changed the version heading, your own heading will appear.

**ENTER** Press **Enter** to return to the command line.

```
Ready; T=n.nn/n.nn hh:mm:ss
```

4. Edit USER DIRECT and add links for USERID MAINT.

   **xedit user direct c**

   Uncomment the following links to the USER MAINT for each component you are moving to SFS:

   GCS: None

   TSAF: None

   AVS: None

   LE370:

```
LINK  P688198H 191 82A WR
LINK  P688198H 2A2 82B WR
LINK  P688198H 2A6 82C WR
LINK  P688198H 2B2 82D WR
LINK  P688198H 2C2 82E WR
LINK  P688198H 2D2 82F WR
```

   RSCS:

```
LINK  P684096K 2B2 850 WR
LINK  P684096K 2C2 851 WR
LINK  P684096K 2D2 852 WR
LINK  P684096K 2A6 853 WR
LINK  P684096K 2A2 854 WR
LINK  P684096K 29D 855 WR
LINK  P684096K 402 858 WR
LINK  P684096K 406 859 WR
LINK  P684096K 191 85A WR
LINK  P684096K 502 85C WR
```

   If you loaded RSCS Source, uncomment:

```
LINK  P684096K 2B3 85D WR
```

   OSA:

```
LINK  2VMVMV20 2B2 840 WR
LINK  2VMVMV20 2C2 841 WR
LINK  2VMVMV20 2D2 842 WR
LINK  2VMVMV20 2A6 843 WR
LINK  2VMVMV20 2A2 844 WR
LINK  2VMVMV20 100 845 WR
LINK  2VMVMV20 300 846 WR
LINK  2VMVMV20 191 848 WR
LINK  OSASF    200 849 WR
LINK  OSASF    400 84A WR
```

   TCPIP:

```
LINK  4TCPIP30 191 865 WR
LINK  4TCPIP30 2C4 866 WR
LINK  4TCPIP30 2D2 868 WR
LINK  4TCPIP30 2A6 869 WR
LINK  4TCPIP30 2A2 86A WR
LINK  4TCPIP30 2B2 86E WR
LINK  4TCPIP30 2B3 86F WR
```

RTM:

```
LINK  4VMRTM10 191 890 WR
LINK  4VMRTM10 2A2 891 WR
LINK  4VMRTM10 2A6 892 WR
LINK  4VMRTM10 2B2 893 WR
LINK  4VMRTM10 2C2 894 WR
LINK  4VMRTM10 2C4 895 WR
LINK  4VMRTM10 2D2 896 WR
LINK  4VMRTM10 400 897 WR
LINK  4VMRTM10 401 898 WR
LINK  4VMRTM10 1CC 899 WR
LINK  4VMRTM10 CCC 89A WR
LINK  VMRTM    191 8A9 WR
```

VMPRF:

```
LINK  4VMPRF10 191 89B WR
LINK  4VMPRF10 2A2 89C WR
LINK  4VMPRF10 2A6 89D WR
LINK  4VMPRF10 2B2 89E WR
LINK  4VMPRF10 2C2 89F WR
LINK  4VMPRF10 2C4 8A0 WR
LINK  4VMPRF10 2D2 8A1 WR
LINK  4VMPRF10 597 8A2 WR
LINK  4VMPRF10 497 8A3 WR
LINK  4VMPRF10 1CC 8A4 WR
LINK  4VMPRF10 CCC 8A5 WR
LINK  VMPRF    191 8A6 WR
LINK  VMPRF    192 8A7 WR
```

DIRM:

```
LINK  4VMDVH10 191 8B0 WR
LINK  4VMDVH10 2A2 8B1 WR
LINK  4VMDVH10 2A6 8B2 WR
LINK  4VMDVH10 2B2 8B3 WR
LINK  4VMDVH10 2C2 8B4 WR
LINK  4VMDVH10 2C4 8B5 WR
LINK  4VMDVH10 2D2 8B6 WR
LINK  4VMDVH10 29D 8B7 WR
LINK  4VMDVH10 29E 8B8 WR
LINK  4VMDVH10 2B1 8BD WR
LINK  4VMDVH10 502 8BE WR
```

TSM:

```
LINK  5654A09A 191 838 WR
LINK  5654A09A 2B2 83A WR
LINK  5654A09A 2D2 83B WR
LINK  5654A09A 2A6 83C WR
LINK  5654A09A 2A2 83D WR
```

ICKDSF:

```
LINK  P684042H 191 822 WR
LINK  P684042H 2A2 823 WR
LINK  P684042H 2A6 824 WR
LINK  P684042H 2B2 825 WR
LINK  P684042H 2C2 826 WR
LINK  P684042H 2D2 827 WR
LINK  P684042H 29D 828 WR
LINK  P684042H 29E 829 WR
```

RACF

```
LINK  5767002P 2B2 8D8 WR
LINK  5767002P 2C2 8D9 WR
LINK  5767002P 2D2 8DA WR
LINK  5767002P 2A6 8DB WR
LINK  5767002P 2A2 8DC WR
LINK  5767002P 2B3 8DD WR
```

5. Save all changes in the USER DIRECT file.

   **====> file**

   ```
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

6. Bring the directory online.

   **directxa user direct**

   ```
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

7. Log off of the MAINT user ID.

   **logoff**

   This is required to pick up the new or changed directory links.

   ```
   CONNECT= nn:nn:nn VIRTCPU= nnn:nn.nn TOTCPU= nnn:nn.nn
   LOGOFF AT hh:mm:ss {EST|EDT} weekday mm/dd/yy

   Press enter or clear key to continue
   ENTER
   ```

8. Log on to the MAINT user ID.

   **ENTER**

   The default password for MAINT is MAINT.

   **logon maint**

   ```
      ⋮

   z/VM V4.3.0    yyyy-mm-dd hh:mm
   ENTER
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

9. Verify that the VMSYS file pool is active.

   **query vmservs**

   ```
   VMSERVS - DSC
   ```

   If active, the system responds saying the server is running in a disconnected state. Otherwise you receive a message about VMSERVS not being logged on.

10. If VMSERVS is not logged on, log on the user ID.

    **xautolog vmservs**

    ```
    COMMAND ACCEPTED
       ⋮
    Ready; T=n.nn/n.nn hh:mm:ss
       ⋮
    DMSSBB3045I Ready for operator communications
    ```

11. Access the 193 minidisk as your Z disk.

    **access 193 z**

    ```
    Ready; T=n.nn/n.nn hh:mm:ss
    ```

12. Move data for the components selected from minidisks to the Shared File System servers (SFS).

    **move2sfs** *component* **(reclaim**

    *component* can be **GCS**, **TSAF**, **AVS**, **LE370**, **OSA**, **RSCS**, **TCPIP**, **TSM**, **ICKDSF**, **RTM**, **PRF**, **DIRM**, or **RACF**. (See "MOVE2SFS" on page 150 for details.)

    **reclaim** removes the minidisks no longer needed from the directory. (The minidisks entries are commented out in the directory.)

    ```
    HCPWMV8456I  PROCESSING COMPONENT component
       ⋮
    HCPWMV8392I  MOVE2SFS EXEC ENDED SUCCESSFULLY
    Ready; T=n.nn/n.nn hh:mm:ss
    ```

13. Edit the USER DIRECT file.

    **xedit user direct c**

14. Comment out all MAINT's LINK statements from the USER DIRECT file that were added in substep 4 on page 84.

    **====> top**
    **====> locate /user maint/**
    **====> locate /link/ & /801/**
    **====> change / LINK/*LINK/:MDISK**

    Locate the USER MAINT statement. Next locate the LINK statements for minidisks starting with 801. The change command comments out all MAINT LINK statements up to statements beginning with **MDISK**. These statements were only used during z/VM Version 4 Release 3.0 installation.
    **Note:** This directory was shipped with all LINK statements coming before the MDISK statements. Make sure no other statements are between the LINK statements.

15. Save all changes in the USER DIRECT file.

    **====> file**

    ```
    Ready; T=n.nn/n.nn hh:mm:ss
    ```

16. Use the DIRECTXA command to update and place the user directory online.

    **directxa user direct**

    ```
    z/VM USER DIRECTORY CREATION PROGRAM - V4 R3.0

    EOJ DIRECTORY UPDATED AND ON LINE
    Ready; T=n.nn/n.nn hh:mm:ss
    ```

17. Log off of the MAINT user ID.

    **logoff**

    This is required to pick up the new or changed directory links.

    ```
    CONNECT= nn:nn:nn VIRTCPU= nnn:nn.nn TOTCPU= nnn:nn.nn
    LOGOFF AT hh:mm:ss {EST|EDT} weekday mm/dd/yy

    Press enter or clear key to continue
    ```
    **ENTER**

## Move Components to SFS Directories

**You are completely done with this appendix.**

# Appendix B. Post Install Load of Optional Items

When you go through the initial installation procedures of z/VM Version 4 Release 3.0, there are optional items you may have chosen not to install. Once your z/VM system is installed, you may choose to add the optional items to your base z/VM system. This appendix is a guide to installing the optional items.

**In this appendix, you will:**

- Prepare the USER DIRECT file for the new items to be loaded
- Run the INSTALL EXEC to load the new items
- Run the necessary post installation steps.

**Note:** You must be logged on to the MAINT user ID on your new z/VM Version 4 Release 3.0 system to complete all the steps in this appendix.

## Step 1. Prepare the USER DIRECT File for New Loads

1. Choose the items you now wish to install.
2. Log on to the MAINT user ID.

   **ENTER** The default password for MAINT is MAINT.

   **logon maint**

   ```
   .
   .
   .
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

3. Make a copy of USER DIRECT.

   **copyfile user direct c userback = = (olddate**

   ```
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

4. Run LATELOAD to update USER DIRECT.

   **lateload**

```
                *** z/VM LATE LOAD ITEM SELECTION PANEL ***

 Select Items you wish to have loaded


Status       Item        Status       Item        Status       Item
------ ----------------- ------ ----------------- ------ --------------
  _    FILEPOOL            _    SMALL FILEPOOL      _    CP/DV SOURCE
  _    CMS/REXX SOURCE     _    VMSES SOURCE        _    RSCS SOURCE
  _    OSA/SF              _    TSM




   PF1 = HELP   PF3/PF12 = QUIT   PF5 = Process   ENTER = Refresh
```

   a. On the z/VM LATE LOAD ITEM SELECTION PANEL panel, select the items you want to late load.
   b. Press **PF5** to process.

```
================================================================================
               *** z/VM LATE LOAD ITEM PLACEMENT ***
       ITEM            DASD     DASD                      EXTENTS
                       LABEL    TYPE                  START         END
================================================================================
    FILEPOOL           ______   ____                  _______    _______
    CP/DV SOURCE       ______   ____                  _______    _______
    CMS/REXX SOURCE    ______   ____                  _______    _______
    VMSES SOURCE       ______   ____                  _______    _______
    RSCS SOURCE        ______   ____                  _______    _______
    OSA/SF             ______   ____                  _______    _______
    TSM                ______   ____                  _______    _______



      PF1 = HELP   PF3/PF12 = QUIT   PF5 = Process   ENTER = Refresh
```

a. On the z/VM LATE LOAD ITEM PLACEMENT panel, specify the DASD label, type, and extents where you want the items loaded. The DASD type must be 3390.

   1) Refer to Table 12 to determine the number of cylinders needed for each item you now choose to install.

*Table 12. Number of 3390 Cylinders Needed to Install LATELOAD Items*

| Item | 3390 |
|---|---|
| FILEPOOL | 1112 |
| SMALL FILEPOOL | 272 |
| CP, DV Source | 208 |
| CMS, REXX Source | 80 |
| VMSES/E Source | 24 |
| RSCS Source | 20 |
| OSA/SF | 455 |
| TSM | 210 |

   2) Do not use cylinder 0. It is reserved for the allocation area.

b. Press **PF5**.

```
The minidisks with the END option specified in this directory will not be
ed in the following DISKMAP file.

File USER DISKMAP A has been created.
HCPLLD8392I LATELOAD EXEC ENDED SUCCESSFULLY
Ready; T=n.nn/n.nn hh:mm:ss
```

5. Edit USER DISKMAP and check for the following:
   - No overlaps exist
   - Cylinder 0 is not used
   - Labels are correct
   - Correct extents are used for each label.

```
xedit user diskmap
```

If there are errors in the file, do one of the following:

### Prepare the USER DIRECT File for New Loads

- Copy USERBACK DIRECT C to USER DIRECT C.

  **copyfile userback direct c user direct c (olddate replace**

  Go to substep 4 on page 90.

  or

- Correct all errors by updating USER DIRECT and then issue the DISKMAP command. If there are still errors in the file, repeat this task.

6. Bring this updated directory online by entering the DIRECTXA command.

   **directxa user direct**

   The DIRECTXA command brings the directory online.

   ```
   EOJ DIRECTORY UPDATED AND ON LINE
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

7. Log off of the MAINT user ID.

   **logoff**

   This is required to pick up the new or changed directory links.

   ```
   CONNECT= nn:nn:nn VIRTCPU= nnn:nn.nn TOTCPU= nnn:nn.nn
   LOGOFF AT hh:mm:ss {EST|EDT} weekday mm/dd/yy

   Press enter or clear key to continue
   ```

## Step 2. Run INSTALL EXEC

**In this step, you will:**

- Run INSTALL to load the optional items you chose.

**Notes:**

1. On all panels, CP and CMS commands can be issued from the panel command line. Line end characters, for example #, cannot be used.
2. Running the INSTALL EXEC requires a full screen terminal with at least 20 lines.
3. Run INSTALL from the 2CC disk accessed as file mode C.

1. Log on to the MAINT user ID.

   **ENTER**

   The default password for MAINT is MAINT.

   **logon maint**

   ⋮

   z/VM V4.3.0 *yyyy-mm-dd hh:mm*
   **ENTER**
   Ready; T=*n.nn*/*n.nn hh:mm:ss*

2. Choose the addresses of your tape drives.

   If you are using CD-ROMs, all optional items are on volume 2. If you are using 3590 tape, all optional items are on volume 1. If you are using 3480 or 3490 tape, FILEPOOL and OSA/SF are on volume 7 and TSM and Source is on volume 8.

   **Note:** If you use a unique tape drive for each volume, or use a tape stacker in automatic mode, the tapes will be loaded without interruption. If you must use one tape drive for multiple volumes, you will be prompted by the INSTALL EXEC when a tape volume needs to be changed.

3. Attach the tape drives by **repeating** this step for **each** tape drive needed.

   **attach** *tapeaddr* ***** *vtapeaddr*

   TAPE *tapeaddr* ATTACHED TO MAINT *vtapeaddr*
   Ready; T=*n.nn*/*n.nn hh:mm:ss*

   *tapeaddr* is the tape drive address.

   *vtapeaddr* is the virtual address where the tape drive will be attached. *vtapeaddr* must be attached at virtual addresses within the following ranges: 180 to 187 or 288 to 28F.

4. **Mount the z/VM System DDR tape(s) or CD-ROM on the corresponding tape drive(s).**

5. Run INSTALL to display the z/VM LOAD MENU panel.

   If installing from CD-ROM, enter:

   **install cd (lateload**

   If installing from 3590 tape, enter:

   **install 3590 (lateload**

### Run INSTALL EXEC

If installing from 3480 or 3490 tape, enter:

**install (lateload**

The z/VM LOAD MENU panel displays after issuing the INSTALL command.

```
                        z/VM LOAD MENU

              ENTER 'S' TO SELECT ('L' INDICATES ALREADY LOADED)

                      L        BASE
                      _        FILEPOOL
                      _        SMALL FILEPOOL
                      _        CP, DV SOURCE
                      _        CMS, REXX SOURCE
                      _        VMSES/E SOURCE
                      _        RSCS SOURCE
                      _        OSA/SF
                      _        TSM




====>

 PF1 = HELP         PF3 = QUIT        PF4 = UNLOCK RELOAD       PF5 = NEXT
```

6. The “L” in the z/VM LOAD MENU panel shows all items you loaded during installation. Mark each item you are now loading with an “S”.
7. Press **PF5** to proceed.

   **PF5**

```
                          LOAD DEVICE MENU

                       MEDIA SELECTED IS: media

                     MOUNT VOLUME           VADDR
                          7                 ______
                          8                 ______




====>
 PF1 = HELP        PF3 = QUIT       PF5 = LOAD          PF12 = RETURN
```

8. Complete the LOAD DEVICE MENU panel.

   **Note:** The LOAD DEVICE MENU panel contains the tape volumes you need to mount based on your load choices from the z/VM LOAD MENU panel. The INSTALL EXEC prompts you when a tape volume needs changing.

   a. Check the **MEDIA SELECTED IS:** field. This is a required field that contains either TAPE, 3590, or CD depending on the parameter used to call the INSTALL exec. If the *media* specified is not correct, press **PF3** to quit and run the INSTALL exec with the correct parameter.

   b. Type in the tape drive addresses.

      Each volume must have an associated tape drive. If you use one tape drive or tape stacker for multiple volumes, you must enter that tape drive address next to each volume for which it will be used.

**Note:** Tape drives must be attached at virtual addresses within the following ranges: 180 to 187 or 288 to 28F.

**Note:** If you use a unique tape drive for each volume, or use a tape stacker in automatic mode, the tapes will be loaded without interruption. If you must use one tape drive for multiple volumes, you will be prompted by the INSTALL EXEC when a tape volume needs to be changed.

9. Press **PF5** to load.

**PF5**

The load starts with the following system messages:

**Note:** You will not see the optional items messages if you chose not to load those items.

```
HCPWIN8388I  CHECKING STATUS OF DRIVES
HCPWIN8381I  CHECKING TAPE VOLUME NUMBER FOR DRIVE vaddr
```

You will receive this message for each tape drive you need to mount. The screen will clear after these messages are displayed.

```
HCPWIN8371I  LOADING FILEPOOL  ...
HCPWIN8371I  LOADING CP, DV SOURCE ...
HCPWIN8371I  LOADING CMS, REXX SOURCE ...
HCPWIN8371I  LOADING VMSES/E SOURCE ...
HCPWIN8371I  LOADING RSCS SOURCE ...
HCPWIN8371I  LOADING OSA/SF ...
HCPWIN8371I  LOADING TSM ...
```

The screen will clear for a few seconds after these messages are displayed.

```
HCPWIN8428I  TOTAL PERCENT LOADED -> nn%
HCPWIN8380I  RESTORING MINIDISK nnn TO volid
```

*volid* is the volume identifier.

**+———Additional messages———+**

```
⋮

HCPWIN8433I  INSTALL PROCESSING CONTINUES
HCPWIN8372A  PLEASE MOUNT VOLUME n ON TAPE DRIVE
             vaddr THEN PRESS ENTER TO CONTINUE
HCPWIN8381I  CHECKING TAPE VOLUME NUMBER FOR DRIVE
             vaddr
⋮
```

Depending on the tape devices you are using for installation, you may receive these tape device management messages.

**+———End of Additional messages———+**

```
HCPWIN8434I item HAS BEEN SUCCESSFULLY LOADED.
```

This message is repeated for each item loaded.

```
⋮
Ready; T=n.nn/n.nn hh:mm:ss
```

## Run INSTALL EXEC

**What to Do Next**

If you loaded only the following:

- CP, DV Source
- CMS, REXX Source
- VMSES/E Source

no additional steps are required. You have now completed this appendix.

Otherwise, go to “Step 3. Update System Tables” on page 97.

## Step 3. Update System Tables

If you just finished loading OSA/SF or TSM, continue with this step. Otherwise, skip to “Step 5. Start the File Pools” on page 100.

**In this step, you will:**

- Update the system-level Software Inventory Tables.

1. Run the POSTDDR EXEC to build POSTDDR PRODLIST and to update the following system-level Software Inventory Tables:

   VM SYSRECS

   VM SYSDESCT

   VM SYSREQT

   VM SYSBLDS

   VM SYSAPPS

   **postddr**

   ```
   HCPWSR8409I GENERATING SOFTWARE INVENTORY FILES
   HCPWSR8413I GENERATING SOFTWARE INVENTORY FILES COMPLETED
   HCPWSR8413I UPDATE OF VM SYSSUF TABLE COMPLETED
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

# Step 4. Load RSU for OSA/SF or TSM

If you just loaded OSA/SF or TSM **and** you have received an RSU, you must load service from the RSU for these components. Otherwise, go to “Step 5. Start the File Pools” on page 100.

**In this step, you will:**

- Load the service files for any or all of the loaded OSA/SF and TSM components from the Recommended Service Upgrade (RSU).

1. Attach a tape drive as virtual device 181. You must use 181.

   **attach** *devno* *** 181**

   ```
   TAPE devno ATTACHED TO MAINT 181
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

2. Mount the RSU on the tape drive. Follow the operation manual for the machine on which you mount the tapes.

   If you are installing with CD-ROM, refer to the *Optical Media Attach/2 User's Guide* and the *Optical Media Attach/2 Technical Reference*.

   **Note:** Make sure that the tape is write-protected.

3. IPL CMS.

   **ipl cms**

   ```
   z/VM V4.3.0    yyyy-mm-dd hh:mm
   ENTER
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

4. If you loaded OSA/SF, receive the service for OSA/SF.

   **service osa**

   ```
   VMFSRV2760I SERVICE processing started
   ⋮
   VMFSRV2760I SERVICE processing completed successfully
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

5. If you loaded TSM, receive the service for TSM.

   **service adsm**

   ```
   VMFSRV2760I SERVICE processing started
   ⋮
   VMFSRV2760I SERVICE processing completed successfully
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

6. Use the DETACH command to rewind, unload, and detach the tape.

   **detach 181**

   ```
   TAPE 0181 DETACHED
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

7. IPL CMS.

**ipl cms**

```
z/VM V4.3.0    yyyy-mm-dd hh:mm
ENTER
Ready; T=n.nn/n.nn hh:mm:ss
```

8. Run PUT2PROD.

**put2prod**

```
VMFP2P2760I PUT2PROD processing started
:
VMFP2P2760I PUT2PROD processing completed successfully
Ready; T=n.nn/n.nn hh:mm:ss
```

# Step 5. Start the File Pools

If you loaded the FILEPOOL or SMALL FILEPOOL item **using the substeps in "Step 2. Run INSTALL EXEC" on page 93**, continue with this step. Otherwise, go to "Step 6. Move OSA/SF or TSM to SFS" on page 103.

**In this step, you will:**

- Start the VMSYS, VMSYSU, and VMSYSR file pools

1. Run INSTPOOL either to start or generate the file pools VMSYS, VMSYSU, and VMSYSR. INSTPOOL will determine whether the file pools are started or generated.

```
instpool
DMSACC724I 2CC replaces C (2CC)
```

**+———Messages received if FILEPOOL was loaded———+**

```
DMSACC724I 2CC replaces E (2CC)
AUTO LOGON  ***       VMSERVS  USERS = n
HCPCLS6056I XAUTOLOG information for VMSERVS: The IPL command is verified by the IPL
  command processor.
VMSERVS : z/VM V4.3.0    yyyy-mm-dd hh:mm
VMSERVS : DMSACP723I B (193) R/O
VMSERVS : DMSWFV1117I FILESERV processing begun at hh:mm:ss on dd month yyyy
VMSERVS : DMSWFV1121I VMSERVS DMSPARMS A1 will be used for FILESERV processing
VMSERVS : DMSWFV1121I VMSYS POOLDEF A1 will be used for FILESERV processing
AUTO LOGON  ***       VMSERVU  USERS = n
HCPCLS6056I XAUTOLOG information for VMSERVU: The IPL command is verified by the IPL
  command processor.
VMSERVU : z/VM V4.3.0    yyyy-mm-dd hh:mm
VMSERVU : DMSACP723I B (193) R/O
VMSERVU : DMSWFV1117I FILESERV processing begun at hh:mm:ss on dd month yyyy
VMSERVU : DMSWFV1121I VMSERVU DMSPARMS A1 will be used for FILESERV processing
VMSERVU : DMSWFV1121I VMSYSn POOLDEF A1 will be used for FILESERV processing
VMSERVU : DMS5BB3045I Ready for operator communications
AUTO LOGON  ***       VMSERVR  USERS = n
HCPCLS6056I XAUTOLOG information for VMSERVR: The IPL command is verified by the IPL
  command processor.
VMSERVR : DMS5BB3045I Ready for operator communications
VMSERVR : z/VM V4.3.0    yyyy-mm-dd hh:mm
VMSERVR : DMSACP723I B (193) R/O
VMSERVR : DMSWFV1117I FILESERV processing begun at hh:mm:ss on dd month yyyy
VMSERVR : DMSWFV1121I VMSERVR DMSPARMS A1 will be used for FILESERV processing
VMSERVR : DMSWFV1121I VMSYSn POOLDEF A1 will be used for FILESERV processing
VMSERVR : DMS6LG3335I CRR log recovery begins at mm-dd-yy hh:mm:ss
VMSERVR : DMS6LG3335I CRR log recovery completes at mm-dd-yy hh:mm:ss
VMSERVR : DMS5BB3045I Ready for operator communications
```

**+———End of Messages received if FILEPOOL was loaded———+**

**+———Messages received for each file pool if SMALL FILEPOOL was loaded———+**

```
DASD 0804 DETACHED
AUTO LOGON  ***       VMSERVn  USERS = n
HCPCLS6056I XAUTOLOG information for VMSERVn: The IPL command is verified by the IPL
  command processor.
VMSERVn : DMSACC724I 19E replaces Y (19E)
VMSERVn : DMSACP723I Y (19E) R/O
VMSERVn : z/VM V4.3.0    yyyy-mm-dd hh:mm
VMSERVn : DMSWSP100W Shared S-STAT not available
VMSERVn : DMSWSP100W Shared Y-STAT not available
```

```
VMSERVn : DMSACP723I B (193) R/O
VMSERVn : DMSWFV1117I FILESERV processing begun at hh:mm:ss on dd month yyyy
VMSERVn : DMSWFV1121I VMSERVn DMSPARMS A1 will be used for FILESERV processing
VMSERVn : DMS4PD3400I Initializing begins for DDNAME = CONTROL
VMSERVn : DMS4PD3400I Initializing ends for DDNAME = CONTROL
VMSERVn : DMS4PD3400I Initializing begins for DDNAME = MDK00001
VMSERVn : DMS4PD3400I Initializing ends for DDNAME = MDK00001
VMSERVn : DMS4PD3400I Initializing begins for DDNAME = MDK00002
VMSERVn : DMS4PD3400I Initializing ends for DDNAME = MDK00002
VMSERVn : DMS4PG3404W File pool limit of 2 minidisks has been reached
VMSERVn : DMS4PD3400I Initializing begins for DDNAME = LOG1
VMSERVn : DMS4PD3400I Initializing ends for DDNAME = LOG1
VMSERVn : DMS4PD3400I Initializing begins for DDNAME = LOG2
VMSERVn : DMS4PD3400I Initializing ends for DDNAME = LOG2
VMSERVn : DMS6LB3336I Initialization begins for the CRR log minidisks
VMSERVn : DMS6LB3336I Initialization completes for the CRR log minidisks
VMSERVn : DMS5FD3032I File pool server has terminated
VMSERVn : DMSWFV1120I File VMSYSn POOLDEF A1 created or replaced
VMSERVn : DMSWFV1117I FILESERV processing ended at hh:mm:ss on dd month yyyy
RDR FILE 0010 SENT FROM VMSERVn  PUN WAS 0001 RECS 0004 CPY  001 A NOHOLD NOKEEP
VMSERVn : File FILESERV VALID A3 sent to MAINT at ZVMV4R30 on mm/dd/yy hh:mm:ss
VMSERVn : Ready; T=n.nn/n.nn hh:mm:ss

HCPQCS150A User VMSERVn has issued a VM read
VMSERVn : CONNECT= hh:mm:ss VIRTCPU= 000:00.90 TOTCPU= 000:02.12
VMSERVn : LOGOFF AT hh:mm:ss EDT WEDNESDAY mm/dd/yy BY MAINT
USER DSC   LOGOFF AS  VMSERVn  USERS = 2     FORCED BY MAINT
DASD 0804 DETACHED

AUTO LOGON  ***       VMSERVn  USERS = 3
HCPCLS6056I XAUTOLOG information for VMSERVn: The IPL command is verified by the IPL
  command processor.
VMSERVn : DMSACC724I 19E replaces Y (19E)
VMSERVn : DMSACP723I Y (19E) R/O
VMSERVn : z/VM V4.3.0    yyyy-mm-dd hh:mm
VMSERVn : DMSWSP100W Shared S-STAT not available
VMSERVn : DMSWSP100W Shared Y-STAT not available
VMSERVn : DMSACP723I B (193) R/O
VMSERVn : DMSWFV1117I FILESERV processing begun at hh:mm:ss on dd month yyyy
VMSERVn : DMSWFV1121I VMSERVn DMSPARMS A1 will be used for FILESERV processing
VMSERVn : DMSWFV1121I VMSYSn POOLDEF A1 will be used for FILESERV processing
VMSERVn : DMS6LG3335I CRR log recovery begins at mm-dd-yy hh:mm:ss
VMSERVn : DMS6LG3335I CRR log recovery completes at mm-dd-yy hh:mm:ss
VMSERVn : DMS5BB3045I Ready for operator communications
```

**+———End of Messages received for each file pool if SMALL FILEPOOL was loaded———+**

```
HCPIFP8392I INSTPOOL EXEC ENDED SUCCESSFULLY
Ready; T=n.nn/n.nn hh:mm:ss
```

2. Rename AUTOLOG1's PROFILE EXEC.

**link autolog1 191 999 mw mautolog**

**access 999 z**

```
DASD 0999 LINKED R/W; R/W BY MAINT
Ready; T=n.nn/n.nn hh:mm:ss
```

**rename profsave execsave z profile exec z**

```
Ready; T=n.nn/n.nn hh:mm:ss
```

## Start the File Pools

**What to Do Next**

Go to “Step 6. Move OSA/SF or TSM to SFS” on page 103.

## Step 6. Move OSA/SF or TSM to SFS

If you loaded the OSA/SF or TSM item and you want to move either of them to SFS, continue with this step. Otherwise, skip to “Step 7. Update the Directory” on page 104.

**In this step, you will:**

- Copy OSA/SF or TSM to SFS.

1. Move data for the components selected from minidisks to the Shared File System servers (SFS).

   **move2sfs** *component* **(reclaim**

   ```
   HCPWMV8456I  PROCESSING COMPONENT component
      ⋮


   HCPWMV8392I  MOVE2SFS EXEC ENDED SUCCESSFULLY
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

   *component* can be **OSA** or **TSM**.

   **reclaim** removes the minidisks no longer needed from the directory. (The minidisks entries are commented out in the directory.)

# Step 7. Update the Directory

**In this step, you will:**

- Comment out MAINT's LINK statements that were added or uncommented in the directory (USER DIRECT) in Step 1. Prepare the USER DIRECT File for New Loads substep 4 on page 90.

1. Edit the USER DIRECT file.

   **xedit user direct c**

2. Comment out all MAINT's LINK statements from the USER DIRECT file that were added in "Step 1. Prepare the USER DIRECT File for New Loads" on page 90. These links were only used for install and should be removed to prevent errors.

   **====> set case mixed ignore**
   **====> top**
   **====> locate /user maint/**
   **====> locate /link/ & /801/**
   **====> change / LINK/*LINK/:MDISK**

   Locate the USER MAINT statement. Next locate the LINK statements for minidisks starting with 801. The change command comments out all MAINT LINK statements up to statements beginning with **MDISK**. These statements were only used during z/VM Version 4 Release 3.0 installation.
   **Note:** This directory was shipped with all LINK statements coming before the MDISK statements. Make sure no other statements are between the LINK statements.

3. Save all changes in the USER DIRECT file.

   **====> file**

   ```
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

   For more information about the directory, see *z/VM: CP Planning and Administration*.

## Step 8. Bring the Changed Directory Online

**In this step, you will:**

- Use the DIRECTXA command to bring the changed directory online

1. Use the DIRECTXA command to update and place the user directory online.

   **directxa user direct**

   ```
   z/VM USER DIRECTORY CREATION PROGRAM - V4 R3.0

   EOJ DIRECTORY UPDATED AND ON LINE
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

2. Log off of the MAINT user ID.

   **logoff** — This is required to pick up the new or changed directory links.

   ```
   CONNECT= nn:nn:nn VIRTCPU= nnn:nn.nn TOTCPU= nnn:nn.nn
   LOGOFF AT hh:mm:ss {EST|EDT} weekday mm/dd/yy

   Press enter or clear key to continue
   ENTER
   ```

3. Log on to the MAINT user ID.

   **ENTER logon maint** — The default password for MAINT is MAINT.

   ```
   ⋮

   z/VM V4.3.0    yyyy-mm-dd hh:mm
   ENTER
   ```

4. If you just finished loading any of the following:
   - OSA/SF
   - TSM

   refer to Chapter 6, “Preinstalled Licensed Products and Features” on page 73. Some of the preinstalled products and features require additional steps to complete the installation process.

**You are completely done with this appendix.**

## Post System DDR Installation Information

# Appendix C. Migrate 51D from Old System

**In this appendix, you will:**

- Migrate your 51D disk from your old system.

  **Note:** Your old system must be a supported VM release.

1. Backup the z/VM Version 4 Release 3.0 System Software Inventory files (the 51D minidisk).
2. Obtain access to the System Software Inventory Files (51D) from your old system. For information on how to obtain access to these files, see your System Programmer.
3. Access the minidisk or SFS directory containing the System Software Inventory files from your old system as file mode Z.

   **access** *old51d* **z**
   Ready; T=*n.nn*/*n.nn hh:mm:ss*

   *old51d* is the minidisk address or the SFS directory ID containing the old System Software Inventory files.

4. Access the 51D minidisk as file mode D.

   **access 51D d**
   Ready; T=*n.nn*/*n.nn hh:mm:ss*

5. Access the 493 minidisk as file mode W.

   **access 493 w**
   Ready; T=*n.nn*/*n.nn hh:mm:ss*

6. Use the MIGR51D EXEC to update the System Software Inventory files.

   **migr51d**

   ```
   HCPMIX8478R Please enter filemode letter of the
               Software Inventory Disk (51D) from
               the previous release.  Press enter
               to Exit.
   ```

   **Z**

   After issuing the MIGR51D command, the following VM Software Inventory Disk (51D) Product and Segment Migration panels display:

## Migrate 51D from Old System

```
          *** VM Software Inventory Disk (51D) Product Migration ***

Set action code AC to D = Do Not Migrate or to M = Migrate product.  Action
code I means product is already installed on new 51D and cannot be migrated.


AC Compname         Prodid   Status    Description
-- ---------------- -------- --------- --------------------------------
D  SHELL            2VMVMZ30 APPLIED   Shell and Utilities for VM/ESA
                                       2.3.0
M  DITTO            5654029C NONE      DITTO/ESA VM 1.2.0

D                   5735NFSQ ENABLED

D  CMS              2VMVMA30 BUILT     CMS component for VM/ESA 2.3.0

D  CP               2VMVMB30 BUILT     CP component for VM/ESA 2.3.0

D  TCPIP            5735FALQ BUILT     TCP/IP LEVEL 310 - TCP/IP FEATURE
                                       (BASE)
I  ICKDSF           5684042H BUILT     ICKDSF DEVICE SUPPORT FACILITIES
                                       R16 for CMS

                                                          Page 1 of 1

             PF1=HELP  PF3/PF12=Quit  PF5=Process  PF8=Forward
```

a. Enter an action code (AC) for each product listed. For information about the panel and action codes, press **PF1** for HELP.

   **Notes:**

   1) Products that are preselected as **D** (Do Not Migrate) should not be changed.
   2) If a product is not supported on the new z/VM release, you should enter **D** (Do Not Migrate) for that product.
   3) Before you delete any product, you must determine whether any product that you intend to migrate is dependent on this product. You can use VMFINFO or VMFSIM SYSDEP to determine the dependents of a product.
   4) This Product Migration panel is only a sample. Your panels will not list the same products, action codes, status, and description.

b. Press **PF5** to display the Segment Migration panel. Depending on the size of your software inventory files, it may take several minutes to process.

```
          *** VM Software Inventory Disk (51D) Segment Migration ***

Set action code AC to D = Do Not Migrate or to M = Migrate segment. Action
code P means segment will be migrated due to product migration.  If ========
or ******** appears under Segname, enter a new name to change the segment
name upon migration ( ======== Must be changed, ******** May be changed ).

AC Segname        Prodid   Compname         Defparms         Bldparms
-- --------       -------- ---------------- ---------------- ----------------
D  CMSBAM   Old-> 2VMVMA30 CMS              B0D-B37 SR       PPF(ESA
            New-> 4VMVMA30 CMS              B0D-B37 SR       PPF(ZVM
   ******** Mig-> 4VMVMA20 CMS              B0D-B37 SR       PPF(ZVM
D  CMSDOS   Old-> 2VMVMA30 CMS              B00-B0C SR       PPF(ESA
            New-> 4VMVMA30 CMS              B00-B0C SR       PPF(ZVM
   ******** Mig-> 4VMVMA20 CMS              B00-B0C SR       PPF(ZVM
D  CMSFILES Old-> 2VMVMA30 CMS              1900-1BFF SR     PPF(ESA
            New-> 4VMVMA30 CMS              1900-1BFF SR     PPF(ZVM
   ******** Mig-> 4VMVMA20 CMS              1900-1BFF SR     PPF(ZVM
D  CMSPIPES Old-> 2VMVMA30 CMS              1800-18FF SR     PPF(ESA
            New-> 4VMVMA30 CMS              1800-18FF SR     PPF(ZVM
   ******** Mig-> 4VMVMA20 CMS              1800-18FF SR     PPF(ZVM
                                                            Page 1 of 4

             PF1=HELP  PF3/PF12=Quit  PF5=Process  PF8=Forward
```

a. Enter an action code for each segment listed. For information about the panel and action codes, press **PF1** for HELP.

   This Segment Migration panel is only a sample. Your panels will not list the same segments, action codes, status, and description.

b. Press **PF5** to process. Depending on the size of your software inventory files, it may take several minutes to process.

7. MIGR51D updated the z/VM Version 4 Release 3.0 VMSES/E System Software Inventory files to reflect the licensed products installed on your old system that you chose to migrate. You must now migrate all code, user IDs, minidisks, and segments associated with each licensed product reflected in the new System Software Inventory files. Refer to the documentation for each licensed product for information on the code, user IDs, minidisks, and segments required.

   If the licensed product segments are built by VMSES/E, you must sign on as any one of the licensed product installation user IDs, this includes MAINT. Then, do the following to update some of the other segment files on the System Software Inventory disk:

   a. Enter:

      **vmfsgmap segbld esasegs segblist**

      At this time, you can make further changes to any segment.

   b. On the first panel, enter:

      **segmerge**

   c. Press the **PF5** key to exit from VMFSGMAP.

   These three steps only need to be done once from one user ID. At this point, the appropriate files on the System Software Inventory disk are updated. Now, you can build the licensed product segments, if necessary, from the corresponding licensed product installation user IDs. When following the information in the licensed product program directories or the *z/VM: Service Guide*, use the ALL option instead of the SERVICED option on the VMFBLD command for the segment.

   For example,

   **vmfbld ppf segbld esasegs segblist myseg (all**

### Migrate 51D from Old System

**Note:** You need to rebuild the segments on the new system to get the SYSTEM SEGID file updated.

# Appendix D. The SYSTEM NETID File

**This appendix contains:**

- Reference material for the SYSTEM NETID file.

The SYSTEM NETID file is referenced when you use CMS commands to communicate across the network. CMS uses the CPUIDs in the SYSTEM NETID file to verify that it is running on a valid network system.

### Record Format

The records in the SYSTEM NETID file have the following two formats:

```
cpuid nodeid netid

*comment
```

### Operands

*cpuid*
is the processor (CPU) serial number found in CPUID positions 3-8. If this is an LPAR, the CPU serial number is proceeded by the LPAR numbers.

*nodeid*
is the local node ID of the RSCS virtual machine (when installing RSCS).

*netid*
is the user ID of the RSCS virtual machine, as defined in the CP directory.

**comment*
is a comment line. In a comment, each line must begin with an asterisk in column one.

### Usage

When you enter commands to communicate across the network, the SYSTEM NETID file is referenced as follows:

1. To transmit notes, files, and messages, the NOTE, SENDFILE, TELL, and RDRLIST commands enter the IDENTIFY command.
2. The IDENTIFY command:
   a. Issues the QUERY CPUID command to retrieve the processor's serial number, and searches the SYSTEM NETID file for a matching serial number.
   b. Issues the QUERY USERID command to retrieve the node identification, and compares it to the node in the SYSTEM NETID record.

   If there is a conflict in nodes between the SYSTEM NETID file and the response from QUERY USERID, the node in SYSTEM NETID takes precedence.

Separate CPUIDs are generated for each processor in a multiprocessor configuration and for each logical processor in an LPAR configuration. If you plan to run this system on multiple processors or in an LPAR environment, you must do one of these two steps:

### The SYSTEM NETID File

- Create a record in the SYSTEM NETID file with the CPUID for each processor that you want to be able to IPL.
- **OR** update each user's directory to include an OPTION control statement containing the CPUID parameter, and place that CPUID parameter value into a record in the SYSTEM NETID file.

  The value specified on the CPUID parameter overrides all of the actual processor CPUIDs, and allows CMS network communications to function independently of the real processor configuration.

# Appendix E. Restore the z/VM System Backup Copy

**In this appendix, you will:**

- Restore the backup copy of your new z/VM system from tape. This example requires a full pack minidisk be defined in the CP directory, USER DIRECT, for each volume you are restoring.

1. Mount the backup tape on a tape drive.
2. Perform an IPL of the tape device.

   **ipl** *devno* **clear**

   *devno* is the address of the tape drive.

3. Use DDRXA to restore the system to disk. Repeat this substep for each DASD volume you are restoring.

```
z/VM DASD DUMP/RESTORE PROGRAM
ENTER CARD READER ADDRESS OR CONTROL STATEMENTS
ENTER:
```

**sysprint cons**

This first control statement tells DDRXA that you want program messages sent to your console.

```
ENTER:
```

**input** *devno* **tape**

The second control statement is the input control statement.

*devno* identifies the device number where the backup tape is mounted.

By typing the word **tape**, the tape device type is automatically identified by the DDR program.

```
ENTER:
```

**output** *devaddr* **dasd** *volid*

This output statement specifies the DASD device to which you are restoring the system.

*devaddr* is the full pack minidisk address of the volume to which you are restoring this tape.

By typing the word **dasd**, the device type (3390) is automatically identified by the DDR program.

**restore all**

The RESTORE ALL statement tells DDRXA to restore the whole tape to the output device.

```
RESTORING volid
DATA DUMPED mm/dd/yy
  AT hh.mm.ss GMT FROM volid
  RESTORED TO volid
INPUT CYLINDER EXTENTS       OUTPUT CYLINDER EXTENTS
      START       STOP           START        STOP
   nnnnnnnn   nnnnnnnn       nnnnnnnn    nnnnnnnn

   ⋮
END OF RESTORE
BYTES RESTORED nnnnnnnnnn
```

Informational messages: GMT means Greenwich Mean Time.

The exact cylinder extents vary according to the device type.

## Restore the z/VM System Backup Copy

```
ENTER:
:
```

Repeat **input**, **output**, and **restore** statements for each DASD you are restoring.

```
ENTER:
```

When DDRXA finishes, it prompts you with ENTER. To end the program, press the **Enter** key.

```
ENTER
END OF JOB
```

**Note:** When DDR encounters the end of a tape, which is continued on the next tape, it prompts you to mount the next tape, if required. If you are using the same tape drive, mount the next tape and DDR will continue. If you are using a different tape drive, issue the INPUT control statement to identify the tape drive and the issue the RESTORE ALL statement to restore the whole tape to the output device.

# Appendix F. Restore Your Named Saved Systems and Segments

**In this appendix, you will:**

- Restore the CMS Named Saved System and saved segments.

You should have a loadable tape of the Named Saved System and segments. If you need to use this backup copy to restore your Named Saved System or segments, perform these steps:

1. Log on to the MAINT user ID.

   **ENTER**

   The default password for MAINT is MAINT.

   **logon maint**

   ```
   ⋮
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

2. Attach a tape drive to MAINT.

   **attach** *devno* *****

   *devno* is the device address of the tape drive.

   ```
   Ready; T=n.nn/n.nn hh:mm:ss
   ```

3. Mount the backup tape on the attached tape drive (*devno*).
4. Spool the console.

   **spool console ***

5. Enter the SPXTAPE command to load the system data files.

   **spxtape load** *devno* **sdf all run**

   *devno* is the address you used to define the tape drive.

   ```
   SPXTAPE LOAD   INITIATED ON VDEV devno
   Ready; T=n.nn/n.nn hh:mm:ss

   LOADING  devno     :       nnn  FILES,  PAGES      nnnn
   ⋮
   LOADING  devno     :       nnn  FILES,  PAGES      nnnn
   SPXTAPE LOAD END-OF-TAPE ON VDEV devno;
   MOUNT NEXT TAPE
   TAPE NUMBER:         devno-001
   FILES PROCESSED:           nnn
   SPOOL PAGES:              nnnn
   LOADING  devno     :       nnn  FILES,  PAGES      nnnn
   ⋮
   LOADING  devno     :       nnn  FILES,  PAGES      nnnn
   RDR FILE fileno1 SENT FROM MAINT    CON WAS fileno RECS nnnn CPY  001 T NOHOLD NOKEEP
   ```

   *fileno1* is the file number of the volume log file. The volume log file records information about the files processed by the SPXTAPE LOAD command that are associated with a particular tape volume.

6. When all volumes have been loaded, use the SPXTAPE END command to end the SPXTAPE load.

**spxtape end** *devno*

```
SPXTAPE END    INITIATED ON VDEV devno
SPXTAPE LOAD COMMAND ENDED      ON VDEV devno
TIME STARTED:        hh:mm:ss
TIME ENDED:          hh:mm:ss
TAPE COUNT:               nnn
FILES PROCESSED:          nnn
SPOOL PAGES:             nnnn
```

The SPXTAPE END command ends the SPXTAPE LOAD operation at the completion of the current file.

```
Ready; T=n.nn/n.nn hh:mm:ss
```

The CMS ready message may occur between the messages.

```
RDR FILE fileno2 SENT FROM MAINT    CON WAS fileno RECS nnnn CPY  001 T NOHOLD NOKEEP
```

*fileno2* is the file number of the command summary log file. The command summary log file records the progress and status of the SPXTAPE LOAD operation.

For more information on the SPXTAPE command, see the *z/VM: CP Command and Utility Reference*.

7. IPL the CMS named saved system.

**ipl** *cmsname*

```
⋮
z/VM V4.3.0    yyyy-mm-dd hh:mm
```

*cmsname* is either the IBM supplied system name (CMS) or the name you defined in DMSNGP on the SYSNAME statement.

If you have changed the version heading, your own heading will appear.

**ENTER**

Press **Enter** to return to the command line.

```
Ready; T=n.nn/n.nn hh:mm:ss
```

# Appendix G. Recover a File or Minidisk

**In this appendix, you will:**

- Restore a minidisk. To restore a minidisk, you may either overlay the existing disk or restore the minidisk to a temporary disk and copy the files to the target disk.
- Recover an individual file from the z/VM System DDR. To recover an individual file, you must first determine on which minidisk the file is located, restore the entire minidisk to a temporary disk, and copy the file from the temporary disk.

**Note:** The INSTALL EXEC requires a fullscreen terminal with at least 20 lines.

1. Log on to the MAINT user ID.
2. Attach tape drive (*devno*) to the MAINT user ID at device address 181.

   **attach** *devno* *** 181**

   *devno* attached to MAINT
   Ready; T=*n.nn*/*n.nn hh:mm:ss*

3. If you want to restore an entire minidisk, skip this step and go to substep 4.

   To recover an individual file, you must first determine on which minidisk the file is located. If you already know on which minidisk the file is located, go to substep 4. Otherwise, check the minidisk map file.

   **access 194 z**

   Ready; T=*n.nn*/*n.nn hh:mm:ss*
   **xedit minidisk map z**

   ⋮

   **quit**

   Ready; T=*n.nn*/*n.nn hh:mm:ss*

   The MINIDISK MAP file lists the minidisks on the z/VM System DDR and the files contained on each minidisk. Look at MINIDISK MAP to determine which minidisk contains the file you want to recover.

4. If you want to recover an individual file or restore the entire minidisk to a temporary disk, you need to define a temporary disk. This temporary disk must be a 3390 DASD type and the same size as the minidisk you want to recover. (See the $ITEMMD$ $TABLE$ on the 2CC disk for the size of the minidisk you want to recover.)

   **define t3390** *loadaddr mdisksize*

   DASD *loadaddr* DEFINED
   Ready; T=*n.nn*/*n.nn hh:mm:ss*

   *loadaddr* is the address of the temporary disk.

   *mdisksize* is the size of the minidisk you want to restore.

   If you receive the following message:

   HCPLNM091E DASD *loadaddr* not defined; temp space not available

   you must add additional temporary disk space to your system or define a minidisk with the address *loadaddr*. If you define a minidisk, it must be a 3390 DASD type and the same size as the minidisk you want to recover.

## Recover a File or Minidisk

5. To restore the chosen minidisk, enter the INSTALL EXEC with the RECOVER option.

   If installing from CD-ROM, enter:

   **install cd (recover** *mdiskaddr loadaddr*

   If installing from 3590, enter:

   **install 3590 (recover** *mdiskaddr loadaddr*

   If installing from 3480 or 3490, enter:

   **install (recover** *mdiskaddr loadaddr*

   *mdiskaddr* is the address of the minidisk to be loaded from the z/VM System DDR.

   *loadaddr* is the address to which you restore the minidisk.

   **Notes:**

   a. *mdiskaddr* is the address of the minidisk to be loaded from the z/VM System DDR tapes or CD-ROM. Refer to the $ITEMMD$ $TABLE$ on the 2CC disk to determine if the minidisk you have chosen to restore has an alias. If the minidisk has an alias, *mdiskaddr* is the alias address. If the minidisk does not have an alias, *mdiskaddr* is the actual minidisk address.

   b. To recover a minidisk and overlay the existing disk, you must link the minidisk in write mode. For example, enter the `LINK CMSBATCH 195 801 WR` command.

   c. *loadaddr* is the address to which you restore the minidisk. If you want to restore an entire minidisk and overlay the existing minidisk, *loadaddr* is the address at which you have the disk linked.

      If the load address (*loadaddr*) is not specified, a temporary disk (T-disk) is created.

   d. You cannot recover the 2CC minidisk directly to the 2CC minidisk. You can recover the 2CC to an address other than 2CC and copy the files you wish to recover to the 2CC minidisk.

6. The following LOAD DEVICE MENU panel displays when you enter the INSTALL EXEC with the RECOVER option.

```
                        LOAD DEVICE MENU

                    MEDIA SELECTED IS: media

                  MOUNT VOLUME          VADDR
                       n                _____









====>
 PF1 = HELP       PF3 = QUIT      PF5 = LOAD         PF12 = RETURN
```

7. Complete the z/VM LOAD DEVICE MENU panel.

**Note:** This LOAD DEVICE MENU panel shows you the volume you need to mount based on the minidisk you want to restore.

a. Check the **MEDIA SELECTED IS:** field. This is a required field that will contain either TAPE, 3590, or CD depending on the parameter used to invoke the INSTALL exec. If the *media* specified is not correct, press **PF3** to quit and run the INSTALL exec with the correct parameter.

b. Type 181 for the tape drive virtual address (VADDR).

c. Mount volume *n* of the z/VM System DDR tape or z/VM CD-ROM on tape drive 181.

d. Press **PF5** to load.

**PF5**

The load starts with the following system messages:

```
HCPWIN8388I  CHECKING STATUS OF DRIVES

HCPWIN8381I  CHECKING TAPE VOLUME NUMBER FOR DRIVE 181

HCPWIN8380I  RESTORING MINIDISK mdiskaddr TO MINIDISK loadaddr

HCPDDR725D SOURCE DASD DEVICE WAS (IS) LARGER THAN OUTPUT DEVICE
RESTORING 430xxx
DATA DUMPED   mm/dd/yy at hh.mm.ss  GMT FROM 430xxx RESTORED TO SYSTEM
INPUT CYLINDER EXTENTS             OUTPUT CYLINDER EXTENTS
      START             STOP          START              STOP
   nnnnnnnn          nnnnnnnn       nnnnnnnn           nnnnnnnn
END OF RESTORE
 BYTES RESTORED nnnnnnnnnn

END OF JOB

HCPWIN8441I  mdiskaddr HAS BEEN RESTORED TO MINIDISK loadaddr
Ready; T=n.nn/n.nn hh:mm:ss
```

8. If you restored the minidisk to a temporary disk, copy the file or files that you want to recover from the temporary disk to the target disk.

**access** *loadaddr fm-1*

```
Ready; T=n.nn/n.nn hh:mm:ss
```

*loadaddr* is the address of the temporary disk.

*fm-1* is any available file mode.

**access** *mdiskaddr fm-2*

```
Ready; T=n.nn/n.nn hh:mm:ss
```

*mdiskaddr* is the address of the target minidisk.

*fm-2* is any available file mode.

**copyfile** *fn ft fm-1 = = fm-2* **(olddate**

```
Ready; T=n.nn/n.nn hh:mm:ss
```

*fn* is the file name of the file you want to recover.

*ft* is the file type of the file you want to recover.

Repeat the COPYFILE command for each file you want to recover.

## Recover a File or Minidisk

# Appendix H. Execs Used during Installation

This section is a general reference for execs you may use during installation. The following execs are described in this section:

DIRONLIN
INSTALL
INSTDEF
INSTDIR
INSTIIS
INSTPLAN
INSTPOOL
INSTVM
IPWIZARD
LATELOAD
MIGR51D
MOVE2SFS
POSTDDR
POSTLOAD

## Exec Descriptions

z/VM provides a number of tools to help you perform install, service, and system generation tasks. Table 13 lists z/VM install, service, and system generation execs and the books describing each exec. Use the following key for this table.

| Abbreviation | Title |
|---|---|
| **VMSES/E I and R** | *z/VM: VMSES/E Introduction and Reference* |
| **Install** | *z/VM: Installation Guide* |
| **CMS Cmd Ref** | *z/VM: CMS Command and Utility Reference* |
| **CP Cmd Ref** | *z/VM: CP Command and Utility Reference* |
| **GCS Ref** | *z/VM: Group Control System* |

*Table 13. z/VM Install, Service, and System Generation Tools*

| Tool | Task | Book |
|---|---|---|
| ASSEMBLE | Processes source statements in assembler language source files. | CMS Cmd Ref |
| CSLGEN | Builds a callable services library (CSL). | CMS Cmd Ref |
| DCSSGEN | Builds the CMS installation saved segment (CMSINST). | CMS Cmd Ref |
| DIRECTXA | Creates a user directory. | CP Cmd Ref |
| DIRONLIN | Brings the directory built by INSTDIR online. | Install |
| DISKMAP | Summarizes the MDISK statements in the user directory. The output shows gaps and overlaps between minidisk assignments. | CP Cmd Ref |
| DOSGEN | Builds the CMSDOS physical saved segment. | CMS Cmd Ref |
| EXECUPDT | Produces an updated version of a $Source file. | CMS Cmd Ref |
| EXPAND | Adds space to a program in object deck form. | VMSES/E I and R |
| GENCPBLS | Updates the CP load list build list. | VMSES/E I and R |

## Exec Descriptions

*Table 13. z/VM Install, Service, and System Generation Tools (continued)*

| Tool | Task | Book |
|---|---|---|
| GENMOD | Generates CMS module files. | CMS Cmd Ref |
| GROUP | Builds a GCS configuration file. | GCS Ref |
| HCPLDR | Calls and controls the system loader. | CP Cmd Ref |
| INSTALL | Loads base and optional components to disks. | Install |
| INSTDEF | Customizes CMS, rebuilds CMS, CP, and GCS, and moves selected items to SFS. | Install |
| INSTDIR | Builds a directory for your installation. | Install |
| INSTFPP | Installs optional products. | VMSES/E I and R |
| INSTIIS | Formats and labels your installation DASD and restores the IIS. | Install |
| INSTPLAN | Selects items to load and DASD type on which to install. | Install |
| INSTPOOL | Starts the file pool servers during installation procedures. | Install |
| INSTVM | Loads items from the z/VM System DDR. | Install |
| IPWIZARD | Creates a minimal TCP/IP configuration that establishes basic connectivity to your IP network. Creates the TCP/IP SYSTEM DTCPARMS, TCPIP DATA, and PROFILE TCPIP files. | Install |
| ITNVTSTR | Processes install and service orders delivered by Advanced Digital Delivery. | VMSES/E I and R |
| LANGGEN | Loads national language text files into a saved segment. | CMS Cmd Ref |
| LATELOAD | Updates the user directory for your installation using the items selected to be loaded. | Install |
| LANGMERG | Combines national language files for an application into a single text file. | CMS Cmd Ref |
| LOADLIB | Lists, copies, or compresses CMS load libraries. | CMS Cmd Ref |
| MIGR51D | Migrates and updates the System Software Inventory files. | Install |
| MOVE2SFS | Moves data for GCS, TSAF, and AVS from minidisks to Shared File System (SFS) servers. | Install |
| POSTDDR | Creates Software Inventory tables. | Install |
| POSTLOAD | Performs cleanup tasks depending on what you have loaded. | Install |
| PRELOAD | Collects multiple text files and reformats them into a single text file. | CMS Cmd Ref |
| PUT2PROD | Places a component, feature, or product that was serviced by the SERVICE exec into production. | VMSES/E I and R |
| SAMGEN | Builds the CMSBAM physical saved segment. | CMS Cmd Ref |
| SAMPNSS | Defines named saved systems. | CMS Cmd Ref |
| SAVEFD | Places file directory information for a shared, extended data format (EDF) R/O minidisk into a discontiguous shared segment (DCSS). | CMS Cmd Ref |
| SERVICE | Installs an RSU or applies CORrective service for the z/VM components, features, or products that are installed on the z/VM System DDR. | VMSES/E I and R |
| SEGGEN | Builds logical saved segments defined in a physical saved segment. | CMS Cmd Ref |
| SNTINFO | Gets discontiguous saved segment (DCSS) information directly from CP. | VMSES/E I and R |
| SPXTAPE | Saves standard spool files and system data files on tape and restores SPXTAPE-format files from tape to the spooling system. | CP Cmd Ref |

*Table 13. z/VM Install, Service, and System Generation Tools (continued)*

| Tool | Task | Book |
|---|---|---|
| UTILITY | Provides occasionally-used installation functions, such as, issuing DIAGNOSE code X'24' and X'210' for a virtual device and creating a stand-alone service utility tape for either or both ICKDSF and DDRXA. | CP Cmd Ref |
| VMFAPPLY | Updates the maintenance level of the specified product. | VMSES/E I and R |
| VMFASM | Updates an ASSEMBLE source file according to entries in a control file, then assembles the source file to produce an object file. | VMSES/E I and R |
| VMFBLD | Builds objects for the specified product. | VMSES/E I and R |
| VMFCNVT | Converts size and block size data into cylinders and displays the results. | VMSES/E I and R |
| VMFCOPY | Copies a file to a VMSES/E target minidisk or SFS directory and updates the parts catalog table on that target. | VMSES/E I and R |
| VMFERASE | Erases a file on a VMSES/E target minidisk or SFS directory and updates the parts catalog table on that target. | VMSES/E I and R |
| VMFEXUPD | Calls the EXECUPDT command to apply updates to a $Source program. | VMSES/E I and R |
| VMFHASM | Updates an ASSEMBLE source file according to entries in a control file, then uses the H assembler to produce an object file. | VMSES/E I and R |
| VMFHLASM | Updates an ASSEMBLE source file according to entries in a control file, then uses the HL assembler to produce an object file. | VMSES/E I and R |
| VMFINFO | Queries the Software Inventory tables. | VMSES/E I and R |
| VMFINS | Installs, migrates, builds, and deletes products. | VMSES/E I and R |
| VMFLKED | Link edits modules into a load library (LOADLIB). | CMS Cmd Ref |
| VMFMAC | Builds macro libraries (MACLIBs) containing macro and copy files. | CMS Cmd Ref |
| VMFMERGE | Applies PTFs to Systems Network Architecture (SNA) products. VMFMERGE is used only to service SNA products. | VMSES/E I and R |
| VMFMRDSK | Consolidates the contents of minidisks/directories within a string. | VMSES/E I and R |
| VMFNLS | Applies updates to national language files and compiles the updated versions. | VMSES/E I and R |
| VMFOVER | Creates a temporary PPF by applying overrides to a source PPF. | VMSES/E I and R |
| VMFPLC | Provides a front end to routines that use VMFPLC2 when conversion to VMFPLCD or a dual path is desired. | CMS Cmd Ref |
| VMFPLCD | Loads files from an envelope, dumps files to an envelope, and controls various envelope operations. | CMS Cmd Ref |
| VMFPLC2 | Loads files from tape, dumps files to tape, and controls various tape drive operations. | CMS Cmd Ref |
| VMFPPF | Compiles a source PPF into its usable form. | VMSES/E I and R |
| VMFPSU | Helps you choose which method to use when you install a Product Service Upgrade (PSU). | VMSES/E I and R |
| VMFQMDA | Displays the current VMSES/E access order. | VMSES/E I and R |
| VMFQOBJ | Returns information about objects defined in build lists. | VMSES/E I and R |
| VMFREC | Processes installation and service tapes. | VMSES/E I and R |
| VMFREPL | Supports the local modification of replacement maintained parts. | VMSES/E I and R |
| VMFREM | Removes PTFs received by the VMFREC exec and applied by the VMFAPPLY exec. | VMSES/E I and R |

## Exec Descriptions

*Table 13. z/VM Install, Service, and System Generation Tools (continued)*

| Tool | Task | Book |
|---|---|---|
| VMFREMOV | Removes PTFs from Systems Network Architecture (SNA) products. VMFREMOV is used only to service SNA products. | VMSES/E I and R |
| VMFSETUP | Sets up a minidisk and SFS directory access order, or detaches minidisks that were linked by previous invocations of VMFSETUP EXEC, depending on how it is invoked. | VMSES/E I and R |
| VMFSGMAP | Processes and displays the saved segment information defined in a saved segment configuration build list and save segment data file. | VMSES/E I and R |
| VMFSIM | Provides an interface to the Software Inventories. | VMSES/E I and R |
| VMFTXT | Builds a text library (TXTLIB) from text decks. | CMS Cmd Ref |
| VMFVIEW | Displays message logs using XEDIT with predefined PF keys. | VMSES/E I and R |
| VMFZAP | Applies ZAPs to Systems Network Architecture (SNA) products. VMFZAP is used only to service SNA products. | VMSES/E I and R |
| ZAP | Modifies or dumps MODULE, LOADLIB, or TXTLIB files. | CMS Cmd Ref |
| ZAPTEXT | Modifies or dumps individual text files. | VMSES/E I and R |

# Understand Syntax Diagrams

This section describes how to read the syntax diagrams. Syntax diagrams show the format to use when calling an exec.

*Table 14. Syntax Diagram Descriptions*

| | |
|---|---|
| ►►— | indicates the beginning of a syntax diagram. |
| —► | shown at the end of a line, indicates that the syntax diagram continues on the next line. |
| ►— | shown at the beginning of a line, indicates that a syntax diagram continues from the previous line. |
| —►◄ | indicates the end of a syntax diagram. |
| **Abbreviations** | Uppercase letters denote the shortest acceptable abbreviation. If an item appears entirely in uppercase letters, it cannot be abbreviated.<br><br>You can type the item in uppercase letters, lowercase letters, or any combination.<br><br>For example:<br>►►—KEYWOrd—————————————————————————————————►◄<br><br>In this example, you can enter KEYWO, KEYWOR, or KEYWORD in any combination of uppercase and lowercase letters. |
| **Symbols** | You must code these symbols exactly as they appear in the syntax diagram.<br><br>For example:<br>`*  Asterisk`<br>`:  Colon`<br>`,  Comma`<br>`=  Equal Sign`<br>`-  Hyphen`<br>`()  Parentheses`<br>`.  Period` |
| **Variables** | Highlighted lowercase items (*like this*) denote variables.<br><br>For example:<br>►►—KEYWOrd—*var_name*—————————————————————————————►◄<br><br>In this example, *var_name* represents a variable you must specify when you code the KEYWORD command. |

## Understand Syntax Diagrams

*Table 14. Syntax Diagram Descriptions (continued)*

**Repetition**

An arrow returning to the left means that the item can be repeated.

For example:


A character within the arrow means you must separate repeated items with that character.

For example:


A number, for example (1), by the arrow references a footnote that identifies how many times the item can be repeated.

For example:


**Notes:**

1 Specify *repeat* up to 5 times.

---

**Required Choices**

When two or more items are in a stack and one of them is on the line, you *must* specify one item.

For example:

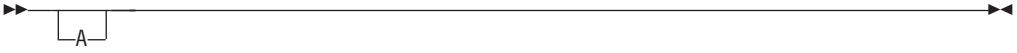

In this example, you must choose A, B, or C.

---

**Optional Choices**

When an item is below the line, the item is optional.

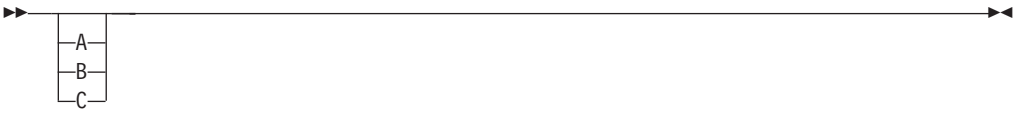
For example:




In this example, you can choose A or nothing at all

When two or more items are in a stack below the line, all of them are options.

For example:




In this example, you can choose A, B, C, or nothing at all.

---

*Table 14. Syntax Diagram Descriptions (continued)*

**Defaults**

Defaults are above the line. The system uses the default unless you override it. You can override the default by coding an option from the stack below the line.

For example:


In this example, A is the default. You can override A by choosing B or C.

**Repeatable Choices**

A stack of items followed by an arrow returning to the left means that you can select more than one item or, in some cases, repeat a single item.

For example:


In this example, you can choose any combination of A, B, or C.

**Syntax Fragments**

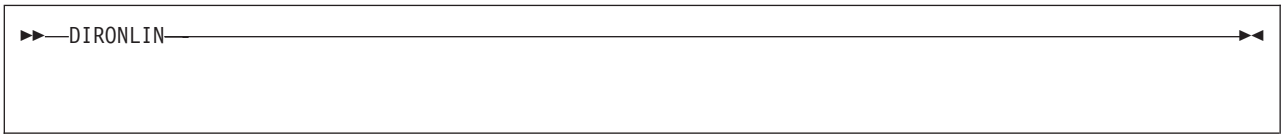
Some diagrams, because of their length, must fragment the syntax. The fragment name appears between vertical bars in the diagram. The expanded fragment appears in the diagram after a heading with the same fragment name.

For example:


**A Fragment:**


In this example, the fragment is named ″A Fragment.″

# DIRONLIN




## Purpose

Use DIRONLIN to bring the directory built by INSTDIR online.

## Messages and Return Codes

**HCP8342E THE COMMAND** *command* **FAILED WITH RC=***rc*

**User Response:** Correct error and rerun DIRONLIN

**Severity:** 100

**HCP8376E DIRONLIN EXEC ENDED IN ERROR**

**User Response:** Correct error and rerun DIRONLIN

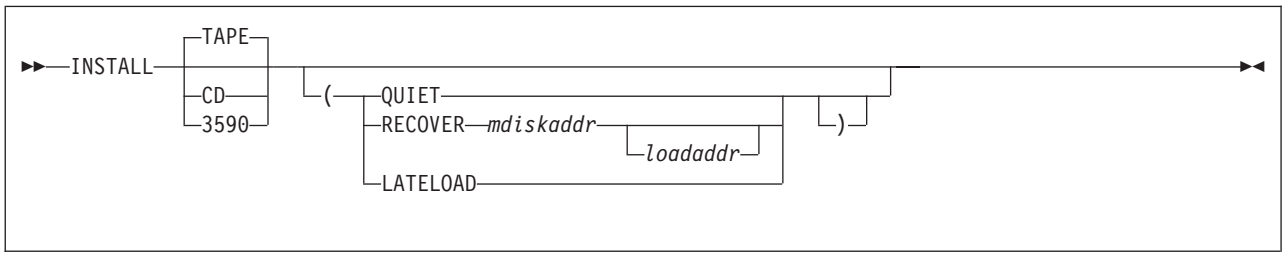
**Severity:** 100

**HCP8391I DIRONLIN EXEC ENDED SUCCESSFULLY**

**User Response:** None.

**Severity:** 0

# INSTALL




## Purpose

Use INSTALL to load the components provided on the z/VM System DDR tapes or CD-ROM. It also recovers the contents of a minidisk from the z/VM System DDR tapes or CD-ROM. The exec is automated and panel-driven to simplify and quicken the load process.

## Operands

**TAPE**
loads the components from 3480 or 3490 tape. This is the default value.

**CD**
loads the components from the CD-ROM.

**3590**
loads the components from 3590 tape.

## Options

**QUIET**
changes your console setting to **noterm** so you will not receive system output messages to your console during the run of the exec. This suppresses all but the percent loaded, loading, and completion messages during the load from the z/VM System DDR tapes or CD-ROM. You will see these messages:

```
HCPWIN8428I  TOTAL PERCENT LOADED -> nn%
HCPWIN8371I  LOADING ...
HCPWIN8434I compname HAS BEEN SUCCESSFULLY LOADED.
```

**Note:** If INSTALL terminates before successful completion, you must manually return your console to the normal state of receiving system messages. Enter from the command line:

| | |
|---|---|
| **spool console term** | You enter this command whether you have terminated the exec or the exec itself has abended because of an error. |

As INSTALL successfully completes, it automatically returns your console to the normal state of receiving system messages.

**RECOVER**
loads the contents of a minidisk from the z/VM System DDR tapes or CD-ROM.

*mdiskaddr*
is the address of the minidisk to be loaded from the z/VM System DDR tapes or CD-ROM.

**INSTALL**

When you recover a minidisk belonging to a user ID other than MAINT, you must specify the alias address instead of the actual minidisk address.

*loadaddr*
is the address to which you restore the minidisk. This disk must be a 3390 DASD and must be the same size as the minidisk address (*mdiskaddr*) being loaded from the z/VM System DDR tapes or CD-ROM.

If *loadaddr* is not specified, INSTALL defines a temporary disk (T-disk) and a message informs you of the address where the minidisk was loaded. When you are finished with this temporary disk (T-disk), you may want to detach it.

**LATELOAD**
allows you to load products after initial install has been completed.

## Usage Notes

1. INSTALL is used with the z/VM System DDR to load z/VM.
2. INSTALL uses data supplied by you or IBM-supplied default data and a user-friendly panel interface to install z/VM.
3. INSTALL allows a selective load of source and component groups defined by you, enabling DASD conservation where appropriate.
4. If the RECOVER option is used with INSTALL, and the *loadaddr* option is not specified, a temporary disk (T-disk) is created.
5. On all panels, CP and CMS commands can be issued from the panel command line. Line end characters, for example #, cannot be used.
6. Running INSTALL requires a full screen terminal with at least 20 lines.
7. INSTALL must be run from the 2CC disk accessed as file mode C.
8. When you need to restore a file and do not know what minidisk it is on, you can look at the MINIDISK MAP file on the 194 minidisk. This file lists the minidisks on the z/VM System DDR and the files contained on each minidisk.

   Once you know the location, you can use the RECOVER option to help you restore the file from the z/VM System DDR. Recover the minidisk that contains the desired file from the z/VM System DDR to a minidisk with the same DASD type and size on your system. Then you can copy the desired file from this restored minidisk to any other desired location. See a detailed description in Appendix G, “Recover a File or Minidisk” on page 117.
9. When you recover a minidisk belonging to a user ID other than MAINT, you must use the alias address as *mdiskaddr*.
10. You cannot recover the 2CC minidisk directly to the 2CC minidisk. You can recover the 2CC to a *loadaddr* other than 2CC and copy the files you wish to recover to the 2CC minidisk.

## Examples

The following are samples of the z/VM LOAD MENU panel and the LOAD DEVICE MENU panel. If you specify the LATELOAD option, the z/VM LOAD MENU panel displays followed by the LOAD DEVICE MENU panel. If you specify the QUIET or RECOVER option, only the LOAD DEVICE MENU panel displays.

```
                        z/VM LOAD MENU

              ENTER 'S' TO SELECT ('L' INDICATES ALREADY LOADED)

                      S        BASE
                      S        FILEPOOL
                      _        SMALL FILEPOOL
                      S        CP, DV SOURCE
                      S        CMS, REXX SOURCE
                      S        VMSES/E SOURCE
                      S        RSCS SOURCE
                      S        OSA/SF
                      S        TSM

====>

 PF1 = HELP         PF3 = QUIT        PF4 = UNLOCK RELOAD       PF5 = NEXT
```

```
                           LOAD DEVICE MENU

                        MEDIA SELECTED IS: media

                      MOUNT VOLUME           VADDR
                           2                 _____
                           3                 _____
                           4                 _____
                           5                 _____
                           6                 _____
                           7                 _____
                           8                 _____




====>
 PF1 = HELP        PF3 = QUIT       PF5 = LOAD          PF12 = RETURN
```

## Messages and Return Codes

**HCP8300E FILE *fileID* NOT FOUND**

**User Response:** None.

**Severity:** 28

**HCP8306E HELPFILE *fn* MUST CONTAIN AT LEAST 5 LINES**

**User Response:** None.

**Severity:** 101

**HCP8307E HELPFILE *fn* MUST NOT CONTAIN MORE THAN 100,003 LINES**

**User Response:** None.

**Severity:** 102

**HCP8308E HELPFILE *fn* MUST HAVE A LRECL OF 80**

**User Response:** None.

**Severity:** 103

**HCP8309E HELPFILE *fn* DOES NOT CONTAIN A HELP FILE HEADER**

**User Response:** None.

**Severity:** 104

**HCP8310E LINE *x* OF HELPFILE *fn* IS NOT BLANK**

**User Response:** None.

**Severity:** 105, 106

**HCP8312E ERROR DISPLAYING HELPFILE *fn***

**User Response:** None.

**Severity:** None.

**HCP8352E** **INVALID {OPERAND** *operand* **| OPTION** *option***} SPECIFIED ON THE** *command* **COMMAND**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

---

**HCP8360A** **WARNING: YOU SELECTED** *item* **FOR RELOAD. RELOADING OVERLAYS ANY CHANGES THAT MAY HAVE BEEN MADE TO THESE ITEMS. DO YOU REALLY WANT TO RELOAD? ENTER (Y)ES OR (N)O:**

**User Response:** Enter a 'YES' or 'NO'.

**Severity:** None.

---

**HCP8361E** **VADDR** *vaddr* **IS NOT A VALID CD DEVICE**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

---

**HCP8363E** **VADDR** *vaddr* **IS AN UNKNOWN TAPE DEVICE**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

---

**HCP8364E** **NO** *fn ft* **FILE FOUND ON THE 2CC DISK**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

---

**HCP8365E** **SYNTAX ERROR IN PRODUCT LAYOUT FILE REASON FOR FAILURE -** *mdisk* **IS A DUPLICATE**

**User Response:** Recover the PRODUCT LAYOUT file (see Appendix G, "Recover a File or Minidisk" on page 117) and rerun INSTALL.

**Severity:** 8

---

**HCP8366E** **MINIDISK ERROR(S) FOR {Recover Operation | *item*}:**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

---

**HCP8367E** **THE FOLLOWING MINIDISK(S) {DO NOT EXIST:** *mdisk mdisk ...* **| ARE READ ONLY:** *mdisk mdisk ...* **| ARE INVALID:** *mdisk mdisk ...* **| MUST BE THE SAME DEVTYPE AS THE SYSTEM DDR:** *mdisk mdisk ...* **| ARE INCORRECT SIZE:** *mdisk mdisk ...* **| HAVE INVALID DEVTYPES:** *mdisk mdisk ...* **}**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

---

**HCP8370E** **PLEASE CORRECT THE INDICATED PROBLEMS AND RERUN THE INSTALL EXEC. ERRORS HAVE BEEN LOGGED IN ERROR $MSGLOG ON THE 2CC DISK**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

---

**HCP8371I** **LOADING** *component* **...**

**User Response:** None.

**Severity:** None.

---

**HCP8372R** **PLEASE MOUNT VOLUME** *volno* **ON TAPE DRIVE** *vaddr* **THEN PRESS ENTER TO CONTINUE**

**User Response:** Mount the indicated volume then press the Enter key.

**Severity:** None.

---

**HCP8373E** **DDR HAS REPORTED {AN ERROR | A RETURN CODE OF 2 | A RETURN CODE OF 4 (PERMANENT TAPE OR DASD I/O ERROR)} [CHECK DDR $MSGLOG ON THE 2CC DISK FOR MORE INFORMATION]**

**User Response:** Refer to the *z/VM: CP Command and Utility Reference* for more information on the DDR command.

**Severity:** 8

---

**HCP8376E** **INSTALL EXEC ENDED IN ERROR**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

---

**HCP8379E** **DRIVE** *vaddr* **FAILED THE EXEC'S REWIND COMMAND WITH RC =** *rc*

**User Response:** Check the tape drive and rerun INSTALL.

**Severity:** 8

---

**HCP8380I RESTORING MINIDISK *mdisk* TO {*label* | MINIDISK *label*}**

**User Response:** None.

**Severity:** None.

**HCP8381I CHECKING TAPE VOLUME NUMBER FOR DRIVE *vaddr***

**User Response:** None.

**Severity:** None.

**HCP8382E VOLUME *volno* IS NOT A DDR INSTALL TAPE**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

**HCP8383R ERROR: WRONG TAPE MOUNTED ON DRIVE *addr* PLEASE MOUNT VOLUME *volno* ON DRIVE *addr* THEN PRESS ENTER TO CONTINUE OR TYPE 'EXIT' TO END INSTALL**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 0,8

**HCP8386E DDR OR DDRXA MODULE DOES NOT EXIST ON SYSTEM**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

**HCP8387E INSTALL EXEC MUST BE EXECUTED FROM THE 2CC DISK WHILE ACCESSED AS 'C'
ACCESS 2CC AS 'C' AND RERUN INSTALL EXEC**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

**HCP8388I CHECKING STATUS OF DRIVES**

**User Response:** None.

**Severity:** None.

**HCP8395E A {TARGET MDISK | WORK DISK} WAS NOT PROVIDED. ATTEMPT TO DEFINE TDISK FOR {TARGET DISK | MIXED DASD LOAD} FAILED.**

**User Response:** Define a work disk or obtain enough tdisk.

**Severity:** 8

**HCP8396E THE WORK DISK *mdisk* IS TOO SMALL. IT MUST BE AT LEAST *cyl* CYLINDERS**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

**HCP8397E THE WORK DISK IS OF THE WRONG DEVICE TYPE. IT MUST BE *devtype***

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

**HCP8399E COPYFILE FROM THE WORK DISK TO *vaddr* FAILED WITH RC=*rc***

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

**HCP8401E INSTALL EXEC MUST BE RUN ON A FULL SCREEN TERMINAL WITH AT LEAST 22 LINES**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

**HCP8406E SYNTAX ERROR IN PRODUCT LAYOUT FILE REASON FOR FAILURE - *mdisk* DOES NOT EXIST IN TAPE LAYOUT SECTION**

**User Response:** Recover the PRODUCT LAYOUT file (see Appendix G, "Recover a File or Minidisk" on page 117) and rerun INSTALL.

**Severity:** 8

**HCP8420R TAPE *addr* IS NOT READY. PLEASE READY THE DRIVE THEN PRESS ENTER TO CONTINUE OR TYPE 'EXIT' TO END INSTALL**

**User Response:** Ready the indicated drive, then press enter to continue. If you wish to exit at this time, enter 'exit'.

**Severity:** 0,8

**HCP8428I TOTAL PERCENT LOADED -> *percent***

**User Response:** None.

**Severity:** None.

**HCP8429E INVALID SYNTAX. OPTIONS {MUST FOLLOW A '(' | MAY NOT FOLLOW A ')'}**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

**HCP8431E THE *mdisk* DISK MUST BE IN R/W MODE**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

**HCP8433I INSTALL PROCESSING CONTINUES [*text*]**

**User Response:** None.

**Severity:** None.

**HCP8434I *comp* HAS BEEN SUCCESSFULLY LOADED**

**User Response:** None.

**Severity:** 0

**HCP8435E 2CC DISK IS FULL.**

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

**HCP8437E TOO MANY ARGUMENTS: *arg***

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

**HCP8438E TOO FEW ARGUMENTS: *arg***

**User Response:** Correct error and rerun INSTALL.

**Severity:** 8

**HCP8439E *mdisk* IS NOT ON THE DDR TAPE**

**User Response:** You tried to recover a minidisk which is not on the z/VM System DDR tape. Correct error and rerun INSTALL.

**Severity:** 8

**HCP8441I *mdisk* HAS BEEN RESTORED TO MINIDISK *mdisk***

**User Response:** None.

**Severity:** 0

**HCP8442E YOU CANNOT RESTORE THE 2CC DIRECTLY TO THE 2CC DISK**

**User Response:** Restore the 2CC files to a temporary disk and copy the files you need to your 2CC minidisk.

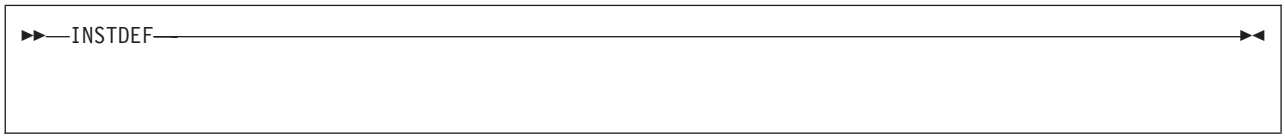
**Severity:** None.

**HCP8464A WARNING: YOU HAVE SPECIFIED THE SAME DISK FOR RECOVERY AS YOUR TARGET. THIS WILL OVERLAY ANY CHANGES THAT MAY HAVE BEEN MADE TO THE DISK. DO YOU REALLY WANT TO CONTINUE? ENTER (Y)ES OR (N)O:**

**User Response:** Enter "Yes" or "No".

**Severity:** None.

# INSTDEF




## Purpose

Use INSTDEF to move selected items to SFS, select the system default language, move Shell and Utilities into BFS, and complete installation cleanup.

## Messages and Return Codes

**HCP8300E FILE *fileID* NOT FOUND**

**User Response:** None.

**Severity:** 28

**HCP8306E HELPFILE *fn* MUST CONTAIN AT LEAST 5 LINES**

**User Response:** None.

**Severity:** 101

**HCP8307E HELPFILE *fn* MUST NOT CONTAIN MORE THAN 100,003 LINES**

**User Response:** None.

**Severity:** 102

**HCP8308E HELPFILE *fn* MUST HAVE A LRECL OF 80**

**User Response:** None.

**Severity:** 103

**HCP8309E HELPFILE *fn* DOES NOT CONTAIN A HELP FILE HEADER**

**User Response:** None.

**Severity:** 104

**HCP8310E LINE *x* OF HELPFILE *fn* IS NOT BLANK**

**User Response:** None.

**Severity:** 105, 106

**HCP8312E ERROR DISPLAYING HELPFILE *fn***

**User Response:** None.

**Severity:** None.

**HCP8338I NOW EXECUTING *function***

**User Response:** None.

**Severity:** 0

**HCP8339I BYPASSING FUNCTION *function* DUE TO *condition***

**User Response:** A INSTDEF function requested by the user is being bypassed due to the condition specified in the message. Processing continues.

**Severity:** 99, 0

**HCP8340E THE INSTDEF FUNCTION *function* HAS FAILED WITH RETURN CODE *rc*. PLEASE CORRECT THE PROBLEM AND RERUN INSTDEF. ERRORS HAVE BEEN LOGGED IN INSTDEF $MSGLOG ON THE 2CC DISK**

**User Response:** A INSTDEF function requested by the user failed with the return code specified in the message. Previous messages describe the error in greater detail. Correct the error and rerun INSTDEF.

**Severity:** 100

**HCP8341I {INSTDEF FUNCTION *function* | THE COMMAND *command*} COMPLETED SUCCESSFULLY**

**User Response:** None.

**Severity:** 0

**HCP8342E THE COMMAND *command* FAILED WITH RC=*rc***

**User Response:** A command issued by INSTDEF failed with the return code specified in the message. Check the command return codes to determine the cause of the error.

**Severity:** 8, 100

**HCP8352E INVALID OPTION(S):** *options(s)*

**User Response:** Correct error and rerun INSTDEF.

**Severity:** 100

**HCP8353W UNDEFINED PFKEY**

**User Response:** Enter correct input.

**Severity:** None.

**HCP8355I THE SPOOLID FOR THE {CMS | GCS} NUCLEUS $$$TLL$$ FILE IS:** *spoolid*

**User Response:** None.

**Severity:** None.

**HCP8357W THE COMMAND** *command* **{FAILED | COMPLETED} WITH RC=** *rc***. PROCESSING CONTINUES**

**User Response:** None.

**Severity:** None.

**HCP8359W INVALID LANGUAGE ID** *string* **ENTERED**

**User Response:** Enter correct input.

**Severity:** None.

**HCP8376E INSTDEF EXEC ENDED IN ERROR**

**User Response:** Previous messages describe the error in detail. Correct the error and rerun INSTDEF.

**Severity:** 100

**HCP8392I INSTDEF EXEC ENDED SUCCESSFULLY**

**User Response:** None.

**Severity:** None.

**HCP8401E INSTDEF EXEC MUST BE RUN ON A FULL SCREEN TERMINAL WITH AT LEAST 20 LINES**

**User Response:** Correct the error and rerun INSTDEF.

**Severity:** 100

**HCP8411I COULD NOT WRITE TO** *log_file* **BECAUSE YOUR 'C' DISK IS FULL. MESSAGE LOGGING HAS BEEN SUSPENDED.**

**User Response:** Correct the disk full condition and rerun INSTDEF, if necessary.

**Severity:** 8

**HCP8415W CMS TAILORING COMPLETED, {INSTALL ID | LANGUAGE ID | VERSION ID} CAN NO LONGER BE CHANGED**

**User Response:** Proceed without changing this field.

**Severity:** None.

**HCP8416W MOVE2SFS COMPLETED, {RECLAIM OPTION | SFS CHOICES} CAN NO LONGER BE CHANGED**

**User Response:** Proceed without changing this field.

**Severity:** None.

**HCP8417W THE FILEPOOL ITEM WAS NOT LOADED, THEREFORE ITEMS CANNOT BE MOVED TO SFS.**

**User Response:** None.

**Severity:** None.

**HCP8444E THE 51D DISK MUST BE ACCESSED AS D IN R/W MODE**

**User Response:** Correct the error and rerun INSTDEF.

**Severity:** 100

**HCP8469W INVALID STATUS** *status* **ENTERED FOR ITEM** *item* **— STATUS MUST BE "N" or "S"**

**User Response:** None.

**Severity:** None.

**HCP8475I ITEMS SELECTED TO BE LOADED ARE:** *items*
**DASD TYPE SELECTED IS:** *dasdtype*
**PACKS NEEDED TO LOAD THESE ARE:** *packlabels*

**User Response:** None.

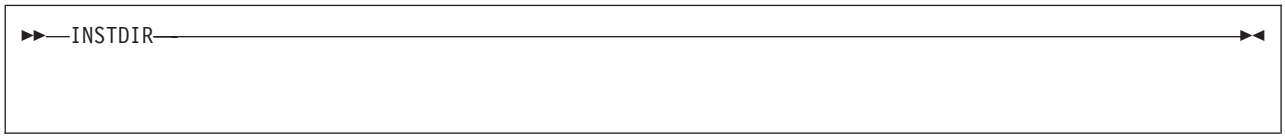
**Severity:** None.

**HCP8498W YOUR 2CC DISK IS TOO FULL TO HOLD AN INSTDEF MESSAGE LOG. MESSAGES WILL BE DISPLAYED TO THE CONSOLE.**

**User Response:** None.

**Severity:** None.

# INSTDIR




## Purpose

Use INSTDIR to dynamically create a user directory for your installation using the items selected to be loaded.

## Messages and Return Codes

**HCP8300E FILE *fileID* NOT FOUND**

**User Response:** Correct error and rerun INSTDIR

**Severity:** 28

**HCP8342E THE COMMAND *command* FAILED WITH RC=*rc***

**User Response:** Correct error and rerun INSTDIR

**Severity:** 100

**HCP8349W INVALID ENTRY, PLEASE REENTER**

**User Response:** Enter correct data

**Severity:** None.

**HCP8376E INSTDIR EXEC ENDED IN ERROR**

**User Response:** Correct error and rerun INSTDIR

**Severity:** 100

**HCP8392I INSTDIR EXEC ENDED SUCCESFULLY**

**User Response:** None

**Severity:** 0

**HCP8401E INSTDIR EXEC MUST BE RUN ON A FULL SCREEN TERMINAL WITH AT LEAST 20 LINES**

**User Response:** Correct error and rerun INSTDIR

**Severity:** 100

**HCP8473E DISK 2CC NOT ATTACHED**

**User Response:** Access 2CC disk and rerun INSTDIR

**Severity:** 100

**HCP8474E DASDTYPE OF *insttype* FOUND IN $INST$ $FILE$ DOES NOT MATCH THE DASDTYPE OF THE 2CC DISK WHICH IS *actual_dasdtype***

**User Response:** Correct error and rerun INSTDIR

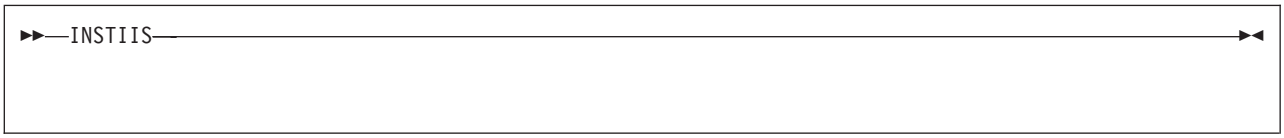
**Severity:** 100

**HCP8492W NOT ENOUGH DISK SPACE DEFINED TO LOAD THE SELECTED ITEMS.**

**User Response:** Correct the entry

**Severity:** None

# INSTIIS




## Purpose

Use INSTIIS to format and label your installation DASD and to restore the IIS.

## Messages and Return Codes

**HCP8300E FILE *fileID* NOT FOUND**

**User Response:** Correct error and rerun INSTIIS

**Severity:** 28

**HCP8306E HELPFILE *fn* MUST CONTAIN AT LEAST 5 LINES**

**User Response:** None.

**Severity:** None.

**HCP8307E HELPFILE *fn* CANNOT CONTAIN MORE THAN 100,003 LINES**

**User Response:** None.

**Severity:** None.

**HCP8308E HELPFILE *fn* MUST HAVE A LRECL OF 80**

**User Response:** None.

**Severity:** None.

**HCP8309E HELPFILE *fn* DOES NOT CONTAIN A HELP FILE HEADER**

**User Response:** None.

**Severity:** None.

**HCP8310E LINE {2 | 4} OF HELPFILE *fn* IS NOT BLANK**

**User Response:** None.

**Severity:** None.

**HCP8312E ERROR DISPLAYING HELPFILE *fn***

**User Response:** None.

**Severity:** None.

**HCP8342E THE COMMAND *command* FAILED WITH RC=*rc***

**User Response:** Correct error and rerun INSTIIS

**Severity:** 100

**HCP8349W INVALID ENTRY, PLEASE REENTER**

**User Response:** Enter correct input

**Severity:** None.

**HCP8353W UNDEFINED PFKEY**

**User Response:** Enter correct input

**Severity:** None.

**HCP8376E INSTIIS EXEC ENDED IN ERROR**

**User Response:** Correct error and rerun INSTIIS

**Severity:** 100

**HCP8377R YOU HAVE SELECTED TO FORMAT THE FOLLOWING PACKS:**
*packnames*
**ALL DATA ON THESE PACKS WILL BE LOST.**
**DO YOU WANT TO CONTINUE ? (Y/N)**

**User Response:** Input Response

**Severity:** None.

**HCP8378R TAPE *tdrvaddr* IS NOT READY. PLEASE READY THE DRIVE, THEN PRESS ENTER TO CONTINUE OR TYPE EXIT TO END INSTIIS**

**User Response:** Ready the drive and press Enter or type "exit"

**Severity:** None.

**HCP8380I Restoring IIS to 430RES**

**User Response:** None.

**Severity:** None.

**HCP8381I CHECKING TAPE VOLUME NUMBER FOR DRIVE** *addr*

**User Response:** None.

**Severity:** None.

**HCP8383R WRONG TAPE MOUNTED ON DRIVE** *tdrvaddr***. PLEASE MOUNT VOLUME** *volume* **ON DRIVE** *tdrvaddr* **THEN PRESS ENTER TO CONTINUE OR TYPE 'EXIT' TO END INSTIIS**

**User Response:** Mount correct tape and press Enter or type "exit"

**Severity:** None.

**HCP8392I INSTIIS EXEC ENDED SUCCESSFULLY**

**User Response:** None.

**Severity:** None.

**HCP8401E INSTIIS EXEC MUST BE RUN ON A FULL SCREEN TERMINAL WITH AT LEAST 20 LINES**

**User Response:** Correct error and rerun INSTIIS

**Severity:** 100

**HCP8472I YOU MUST** *action* **BEFORE PRESSING PF5 TO PROCESS**

**User Response:** Enter correct input

**Severity:** None.

**HCP8473E DASD/TAPE DRIVE** *disk/drive* **NOT ATTACHED**

**User Response:** Correct error and rerun INSTIIS

**Severity:** 100

**HCP8481I EXITING INSTIIS AT USER REQUEST**

**User Response:** None.

**Severity:** 99

**HCP8482E THE FIRST PACK LABEL IS** *label***. IT MUST BE A RES PACK.**

**User Response:** Correct error and rerun INSTIIS

**Severity:** 100

**HCP8483R YOU HAVE SELECTED NOT TO FORMAT YOUR DASD. THIS ASSUMES YOU HAVE DONE THIS PRIOR TO ENTERING THIS EXEC. ANY PROCESSING WHICH FOLLOWS THIS PROMPT COULD RESULT IN ERRORS IF YOU HAVE NOT MANUALLY FORMATTED AND LABELED YOUR DASD. DO YOU WANT TO CONTINUE ? (Y/N)**

**User Response:** Input Response

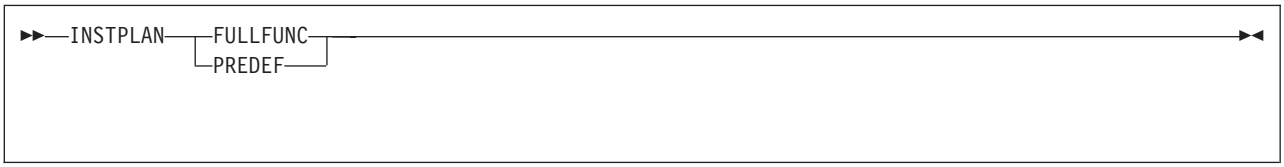
**Severity:** None.

**HCP8490I NOW FORMATTING PACK** *packaddr*

**User Response:** None.

**Severity:** None.

# INSTPLAN




## Purpose

Use INSTPLAN to select items to load and the 3390 DASD model on which to install.

## Operands

**FULLFUNC**
displays the z/VM INSTALLATION PLANNING panel, which lists the items to load and the DASD model on which to install.

**PREDEF**
requests the DASD model and language to be used for installation.

## Messages and Return Codes

**HCP8300E FILE *fileID* NOT FOUND**

**User Response:** Correct error and rerun INSTPLAN

**Severity:** 28

**HCP8306E HELPFILE *fn* MUST CONTAIN AT LEAST 5 LINES**

**User Response:** None.

**Severity:** None.

**HCP8307E HELPFILE *fn* CANNOT CONTAIN MORE THAN 100,003 LINES**

**User Response:** None.

**Severity:** None.

**HCP8308E HELPFILE *fn* MUST HAVE A LRECL OF 80**

**User Response:** None.

**Severity:** None.

**HCP8309E HELPFILE *fn* DOES NOT CONTAIN A HELP FILE HEADER**

**User Response:** None.

**Severity:** None.

**HCP8310E LINE {2 | 4} OF HELPFILE *fn* IS NOT BLANK**

**User Response:** None.

**Severity:** None.

**HCP8312E ERROR DISPLAYING HELPFILE *fn*.**

**User Response:** None.

**Severity:** None.

**HCP8319E YOU MUST SPECIFY AN OPERAND ON THE INSTPLAN COMMAND**

**User Response:** Correct error and rerun INTPLAN.

**Severity:** 100

**HCP8322R ENTER MODEL OF *dtype* YOU ARE INSTALLING ON.**
**VALID ENTRIES ARE SINGLE, DOUBLE, OR TRIPLE.**
**PRESS ENTER TO EXIT**

**User Response:** None.

**Severity:** 0

**HCP8323R PLEASE ENTER THE DEFAULT SYSTEM LANGUAGE. VALID ENTRIES ARE AMENG, UCENG, KANJI, OR GERMAN.**
**PRESS ENTER TO EXIT.**

**User Response:** None.

**Severity:** 0

---

**HCP8342E THE COMMAND *command* FAILED WITH RC=*rc***

**User Response:** Correct error and rerun INSTPLAN

**Severity:** 100

---

**HCP8349W INVALID ENTRY, PLEASE RE-ENTER**

**User Response:** Correct error and rerun INSTPLAN.

**Severity:** 0

---

**HCP8352E INVALID OPERAND *operand* SPECIFIED ON THE INSTPLAN COMMAND**

**User Response:** Correct error and rerun INSTPLAN.

**Severity:** 0

---

**HCP8353W UNDEFINED PFKEY**

**User Response:** Enter correct input

**Severity:** None.

---

**HCP8376E INSTPLAN EXEC ENDED IN ERROR**

**User Response:** Correct error and rerun INSTPLAN

**Severity:** 100

---

**HCP8391I INSTPLAN EXEC ENDED SUCCESSFULLY**

**User Response:** None.

**Severity:** 0

---

**HCP8401E INSTPLAN EXEC MUST BE RUN ON A FULL SCREEN TERMINAL {WITH AT LEAST 20 LINES | WITH AT LEAST 80 COLUMNS}**

**User Response:** Correct error and rerun INSTPLAN

**Severity:** 100

---

**HCP8431E THE *mdisk* DISK MUST BE IN R/W MODE.**

**User Response:** Correct error and rerun INSTPLAN.

**Severity:** 0

---

**HCP8468W BASE CODE MUST BE LOADED**

**User Response:** Enter correct input

**Severity:** None.

---

**HCP8469W INVALID STATUS *status* ENTERED FOR ITEM *item***

**User Response:** Enter correct input

**Severity:** None.

---

**HCP8471W ONLY ONE TYPE OF DASD MAY BE SELECTED**

**User Response:** Enter correct input

**Severity:** None.

---

**HCP8472I YOU MUST SELECT A DASD TYPE BEFORE PRESSING PF5 TO PROCESS**

**User Response:** Enter correct input

**Severity:** None.

---

**HCP8475I THE ITEMS YOU SELECTED TO BE LOADED ARE:**
*items*
**THE ITEMS YOU SELECTED NOT TO BE LOADED ARE:**
*items*
**THE DASD TYPE YOU SELECTED TO LOAD ON IS:**
*dasdtype*
**THE PACKS NEEDED TO LOAD THESE ITEMS ARE:**
*packnames*

**User Response:** None.

**Severity:** None.

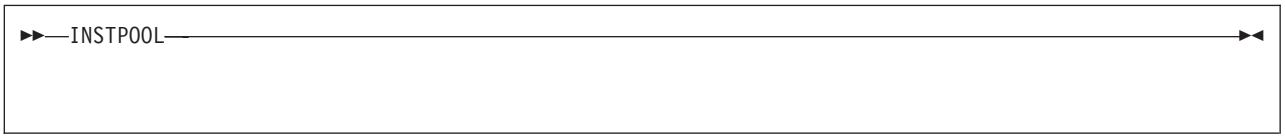
---

**HCP8476E YOU CANNOT SELECT BOTH THE FILEPOOL AND THE SMALL FILEPOOL ITEMS**

**User Response:** Enter correct input

**Severity:** None.

# INSTPOOL




## Purpose

Use INSTPOOL to start the file pool servers during installation procedures.

## Messages and Return Codes

**HCP8324E ERROR OCCURED DURING BUILD OF FILEPOOL** *filepool*

**User Response:** Correct error and rerun INSTPOOL

**Severity:** 100

**HCP8342E THE COMMAND** *command* **FAILED WITH RC=***rc*

**User Response:** Correct error and rerun INSTPOOL

**Severity:** 100

**HCP8376I INSTPOOL EXEC ENDED IN ERROR**

**User Response:** Correct error and rerun INSTPOOL

**Severity:** 100

**HCP8392I INSTPOOL EXEC ENDED SUCCESSFULLY**

**User Response:** None

**Severity:** 0

**HCP8494I SHARED FILE NOT LOADED**

**User Response:** Shared file not loaded. INSTPOOL is not needed.

**Severity:** 0

**HCP8495E SERVER** *server* **NOT RESPONDING**

**User Response:** Correct error and rerun INSTPOOL

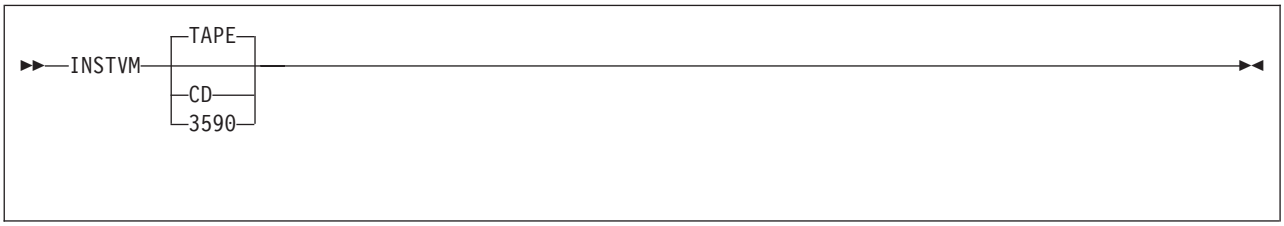
**Severity:** 100

**HCP8496E SERVER** *server* **DID NOT RETURN A READER FILE**

**User Response:** Correct error and rerun INSTPOOL

**Severity:** 100

# INSTVM




## Purpose

Use INSTVM to load items from the z/VM System DDR. You can load the items from tape or CD-ROM.

## Operands

**TAPE**
loads the components from 3480 or 3490 tape. This is the default value.

**CD**
Loads the components from the CD-ROM. Otherwise, the components are loaded from the tape.

**3590**
loads the components from 3590 tape.

## Messages and Return Codes

**HCP8339I BYPASSING *function* DUE TO PROGRAM RESTART**

**User Response:** None.

**Severity:** 0

**HCP8342E THE COMMAND *command* FAILED WITH RC= *rc***

**User Response:** Correct error and rerun INSTVM.

**Severity:** 100

**HCP8376E INSTVM EXEC ENDED IN ERROR**

**User Response:** Correct error and rerun INSTVM.

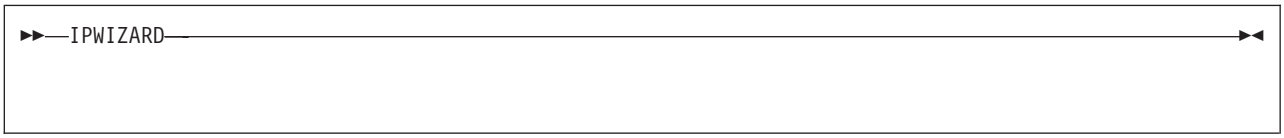
**Severity:** 0

**HCP8392I INSTVM EXEC ENDED SUCCESSFULLY**

**User Response:** None.

**Severity:** 0

# IPWIZARD




## Purpose

Use the IPWIZARD command to create a minimal TCP/IP configuration that establishes basic connectivity to your IP network. The command displays a panel requesting network information. After you fill out the panel, the information is processed and the TCP/IP SYSTEM DTCPARMS, TCPIP DATA, and PROFILE TCPIP files are created.

## Usage Notes

1. IPWIZARD requires access to MAINT's 193 and 2CC minidisks.

## Messages and Return Codes

**HCP8300E FILE *fileID* NOT FOUND**

**User Response:** Correct error and rerun IPWIZARD.

**Severity:** 28

**HCP8312E ERROR DISPLAYING HELP FILE *fileID***

**User Response:** Correct error and rerun IPWIZARD.

**Severity:** None.

**HCP8330E DEVICE ADDRESS MUST BE BETWEEN *addr1* and *addr2***

**User Response:** Enter a valid address. It must be between *addr1* and *addr2*.

**Severity:** None.

**HCP8342E THE COMMAND *command* FAILED WITH RC=*rc***

**User Response:** Correct error and rerun IPWIZARD.

**Severity:** 100

**HCP8352E INVALID MTU SIZE ENTERED**

**User Response:** Enter correct input.

**Severity:** None.

**HCP8353W UNDEFINED PFKEY**

**User Response:** Enter correct input.

**Severity:** None.

**HCP8357E INVALID IP ADDRESS ENTERED**

**User Response:** Enter correct input.

**Severity:** None.

**HCP8376E IPWIZARD EXEC ENDED IN ERROR**

**User Response:** Correct error and rerun IPWIZARD.

**Severity:** 100

**HCP8392I IPWIZARD EXEC ENDED SUCCESSFULLY**

**User Response:** None.

**Severity:** 0

**HCP8401E IPWIZARD EXEC MUST BE RUN ON A FULL SCREEN TERMINAL {WITH AT LEAST 20 LINES | WITH AT LEAST 80 COLUMNS}**

**User Response:** Correct error and rerun IPWIZARD.

**Severity:** 100

**HCP8431E THE *mdisk* DISK MUST BE IN R/W MODE TO RUN IPWIZARD**

**User Response:** Correct error and rerun IPWIZARD.

**Severity:** 100

**HCP8471W ONLY ONE *selection* MAY BE SELECTED**

**User Response:** You specified more than one item. You can specify only one. Enter correct input.

**Severity:** None.

---

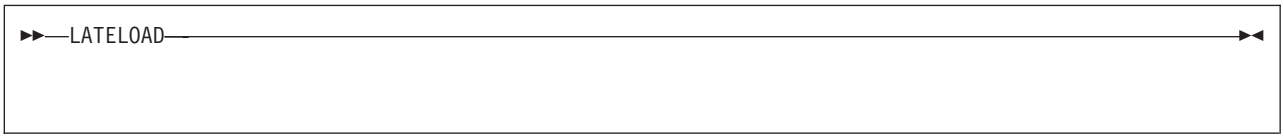
**HCP8472I YOU MUST *action* BEFORE PRESSING PF*n* TO PROCESS**

**User Response:** Correct error and press PF*n*.

**Severity:** None.

Refer to *z/VM: TCP/IP Level 430 Messages and Codes* for information about the DTCIPW messages you may receive.

# LATELOAD




## Purpose

Use LATELOAD to update the user directory for your installation using the items selected to be loaded.

## Messages and Return Codes

**HCP8300E FILE *fileID* NOT FOUND**

**User Response:** Correct error and rerun LATELOAD

**Severity:** 28

**HCP8306E HELPFILE *fn* MUST CONTAIN AT LEAST 5 LINES**

**User Response:** None.

**Severity:** None.

**HCP8307E HELPFILE *fn* CANNOT CONTAIN MORE THAN 100,003 LINES**

**User Response:** None.

**Severity:** None.

**HCP8308E HELPFILE *fn* MUST HAVE A LRECL OF 80**

**User Response:** None.

**Severity:** None.

**HCP8309E HELPFILE *fn* DOES NOT CONTAIN A HELP FILE HEADER**

**User Response:** None.

**Severity:** None.

**HCP8310E LINE {2 | 4} OF HELPFILE *fn* IS NOT BLANK**

**User Response:** None.

**Severity:** None.

**HCP8312E ERROR DISPLAYING HELPFILE *fn*.**

**User Response:** None.

**Severity:** None.

**HCP8342E THE COMMAND *command* FAILED WITH RC=*rc***

**User Response:** Correct error and rerun LATELOAD

**Severity:** 100

**HCP8353W UNDEFINED PFKEY**

**User Response:** Enter the correct input

**Severity:** None

**HCP8376E LATELOAD EXEC ENDED IN ERROR**

**User Response:** Correct error and rerun LATELOAD

**Severity:** 100

**HCP8392I LATELOAD EXEC ENDED SUCCESFULLY**

**User Response:** None

**Severity:** 0

**HCP8401E LATELOAD EXEC MUST BE RUN ON A FULL SCREEN TERMINAL WITH AT LEAST 20 LINES**

**User Response:** Correct error and rerun LATELOAD

**Severity:** 100

**HCP8472I YOU MUST INPUT ALL *fields* BEFORE PRESSING PF5 TO PROCESS**

**User Response:** Fill in all the fields specified

**Severity:** None

**HCP8473E DISK 2CC NOT ATTACHED**

**User Response:** Access 2CC disk and rerun LATELOAD

**Severity:** 100

**HCP8476E YOU CANNOT LOAD BOTH THE FILEPOOL AND THE SMALL FILEPOOL ITEMS.**

**User Response:** Select either the FILEPOOL **or** SMALL FILEPOOL item.

**Severity:** 100

---

**HCP8485I INVALID DASD TYPE ENTERED. ONLY VALID TYPE IS 3390**

**User Response:** Correct the entry

**Severity:** None

---

**HCP8486I STARTING EXTENT MUST BE SMALLER THAN THE ENDING EXTENT**

**User Response:** Correct the entry

**Severity:** None

---

**HCP8487I FREE EXTENTS ON PACK** *respack* **START AT** *type restart*

**User Response:** Correct the entry

**Severity:** None

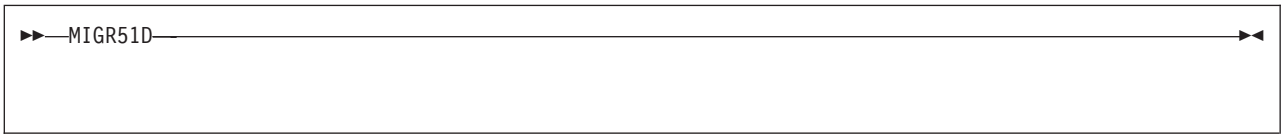
---

**HCP8489I** *type starting/ending* **EXTENT MUST BE LESS THAN 5 CHARACTERS.**

**User Response:** Correct the entry

**Severity:** None

# MIGR51D




## Purpose

Use MIGR51D to update the System Software Inventory files of z/VM Version 4 Release 3.0 from the inventory files of your previous VM release. MIGR51D displays panels that allow you to select which products and segments to migrate and not to migrate.

## Messages and Return Codes

**HCP8300E FILE *fileID* NOT FOUND**

**User Response:** Correct error and rerun MIGR51D.

**Severity:** 28

**HCP8306E HELPFILE *fn* MUST CONTAIN AT LEAST 5 LINES**

**User Response:** None.

**Severity:** None.

**HCP8307E HELPFILE *fn* CANNOT CONTAIN MORE THAN 100,003 LINES**

**User Response:** None.

**Severity:** None.

**HCP8308E HELPFILE *fn* MUST HAVE A LRECL OF 80**

**User Response:** None.

**Severity:** None.

**HCP8309E HELPFILE *fn* DOES NOT CONTAIN A HELP FILE HEADER**

**User Response:** None.

**Severity:** None.

**HCP8310E LINE *x* OF HELPFILE *fn* IS NOT BLANK**

**User Response:** None.

**Severity:** None.

**HCP8312E ERROR DISPLAYING HELPFILE *fn*.**

**User Response:** None.

**Severity:** None.

**HCP8342E THE COMMAND *command* FAILED WITH RC=*rc.***

**User Response:** Correct the error and rerun MIGR51D.

**Severity:** 99 or 100 (If you received RC=99, an error occurred, but the new, current 51D disk has been restored to its original condition.)

**HCP8353W UNDEFINED PFKEY**

**User Response:** Enter correct input.

**Severity:** None.

**HCP8385W CANNOT MIGRATE SEGMENT *name*. SEGMENT NAME MUST BE CHANGED**

**User Response:** Enter correct input.

**Severity:** None.

**HCP8401E MIGR51D EXEC MUST BE RUN ON A FULL SCREEN TERMINAL {WITH AT LEAST 22 LINES | WITH AT LEAST 80 COLUMNS}**

**User Response:** Correct error and rerun MIGR51D.

**Severity:** 99 (An error occurred, but the new, current 51D disk has been restored to its original condition.)

**HCP8423W CANNOT MIGRATE SEGMENT *name*. SEGMENT NAME IS ALREADY IN USE.**

**User Response:** Enter correct input.

**Severity:** None.

**HCP8427W SEGMENT NAME *name* ENTERED FOR SEGMENT *name* IS ALREADY IN USE.**

**User Response:** Enter correct input.

**Severity:** None.

**HCP8444E THE 51D DISK MUST BE ACCESSED AS D IN R/W MODE**

**User Response:** Correct the error and rerun MIGR51D.

**Severity:** 8

---

**HCP8469W INVALID {STATUS** *status* **| SYSTEMNAME** *name* **| OPTION** *option* **} ENTERED FOR {ITEM** *item* **| PRODID** *segment***}**

**User Response:** Enter correct input.

**Severity:** None.

---

**HCP8477E A temporary MIGR51D file has been found on the previous release's Software Inventory Disk (51D). This disk must be restored prior to restarting MIGR51D.**

**User Response:** A previous run of MIGR51D ended abnormally. Using your backups, restore the previous releases's 51D disk to its original condition and rerun MIGR51D.

**Severity:** 8

---

**HCP8478R Please enter filemode letter of the Software Inventory Disk (51D) from the previous release. Press enter to exit.**

**User Response:** Enter the file mode or press the Enter key.

**Severity:** 0

---

**HCP8479E Invalid filemode entered:** *fm*

**User Response:** Enter the correct file mode.

**Severity:** 99 (An error occurred, but the new, current 51D disk has been restored to its original condition.)

---

**HCP8480E Previous release's Software Inventory Disk (51D) did not pass validity check. Please correct and reissue MIGR51D.**

**User Response:** Correct error and rerun MIGR51D.

**Severity:** 99 (An error occurred, but the new, current 51D disk has been restored to its original condition.)

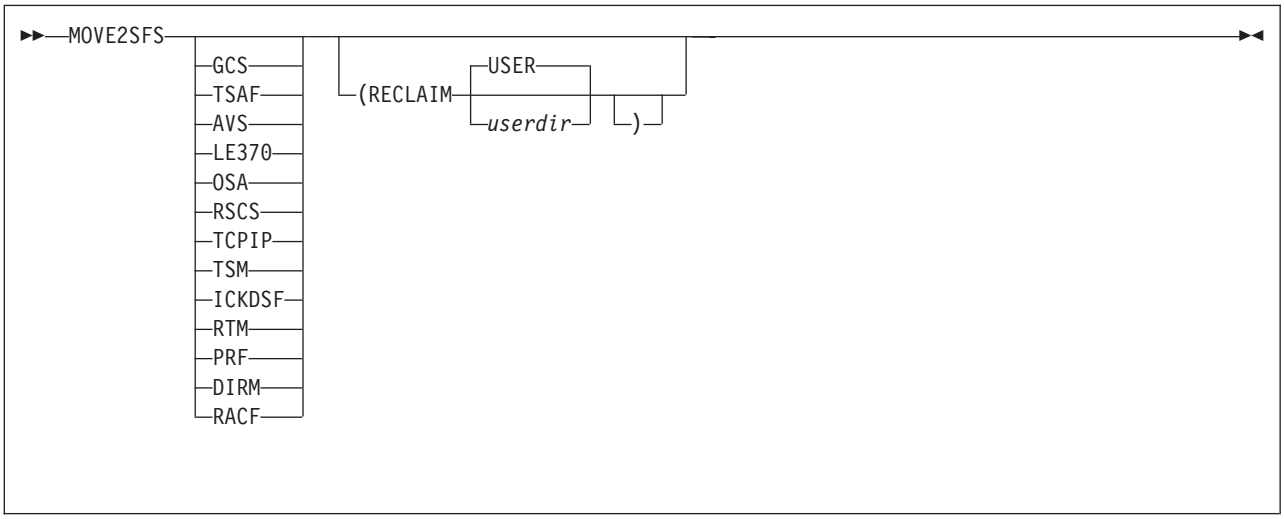
---

**HCP8499E The** *fn ft fm* **table contains the following duplicate key entries:** *data*

**User Response:** Correct the table and rerun MIGR51D.

**Severity:** 99

# MOVE2SFS




## Purpose

Use MOVE2SFS to move data from minidisks to the Shared File System servers (SFS) and reclaim the unused minidisk space. MOVE2SFS creates the subdirectories on the VMSYS file pool that each component needs and then copies the data from the minidisks to the correct subdirectories. The System-Level Software Inventory tables VM SYSRECS and VM SYSAPPS are updated.

## Operands

**GCS**
If GCS is chosen, then the data for GCS will be copied from minidisks to SFS.

**TSAF**
If TSAF is chosen, then the data for TSAF will be copied from minidisks to SFS.

**AVS**
If AVS is chosen, then the data for AVS will be copied from minidisks to SFS.

**LE370**
If LE370 is chosen, then the data for LE370 will be copied from minidisks to SFS.

**OSA**
If OSA is chosen, then the data for OSA will be copied from minidisks to SFS.

**RSCS**
If RSCS is chosen, then the data for RSCS will be copied from minidisks to SFS.

**TCPIP**
If TCPIP is chosen, then the data for TCPIP will be copied from minidisks to SFS.

**TSM**
If TSM is chosen, then the data for TSM will be copied from minidisks to SFS.

**ICKDSF**
If ICKDSF is chosen, then the data for ICKDSF will be copied from minidisks to SFS.

**RTM**
If RTM is chosen, then the data for RTM will be copied from minidisks to SFS.

**PRF**
If PRF is chosen, then the data for VMPRF will be copied from minidisks to SFS.

**DIRM**
If DIRM is chosen, then the data for DirMaint will be copied from minidisks to SFS.

**RACF**
If RACF is chosen, then the data for RACF will be copied from minidisks to SFS.

## Options

**RECLAIM**
reclaims minidisks of moved items by commenting out their entries in the directory specified, bringing the directory online, and detaching the minidisks.

*userdir*
is the file name of the directory file. USER is the DEFAULT.

## Usage Notes

1. The 2CC minidisk must be accessed in R/W mode.
2. The Software Inventory minidisk (usually 51D) must be accessed as the file mode defined in VMFINS DEFAULT and it must be accessed in R/W mode. By default, the Software Inventory minidisk is 51D and is accessed as D.
3. The 193 minidisk must be accessed.
4. The VMSYS file pool must be active.
5. If you want to reclaim minidisks for either TSAF or AVS, you must move both TSAF and AVS because they share minidisks.

## Messages and Return Codes

**HCP8300E FILE *fileID* NOT FOUND**

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 28

**HCP8342E THE COMMAND *command* FAILED WITH RC=*rc***

**User Response:** Check the command return codes to determine the cause of the error.

**Severity:** 8

**HCP8352E INVALID {OPERAND *operand* | OPTION *option*} SPECIFIED ON THE MOVE2SFS COMMAND. PLEASE CORRECT AND REENTER**

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 8

**HCP8366E MINIDISK ERROR(S) FOR *component***

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 8

**HCP8367E THE FOLLOWING MINIDISKS DO NOT EXIST: *mdisk mdisk ...***

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 8

**HCP8376I MOVE2SFS EXEC ENDED IN ERROR**

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 8, 28

**HCP8392I MOVE2SFS EXEC ENDED SUCCESSFULLY.**

**User Response:** None.

**Severity:** 0

**HCP8399E COPYFILE FROM THE MINIDISK *mdisk* TO *subdirectory_name* FAILED WITH RC=*rc***

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 8

**HCP8411E COULD NOT WRITE TO *file* BECAUSE YOUR '2CC' DISK IS FULL**

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 8

**HCP8422E ATTEMPT TO QUERY DISK FAILED WITH RC=*rc***

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 8

**HCP8431E THE *mdisk* DISK MUST BE IN R/W MODE.**

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 8

**HCP8437E TOO MANY {OPERANDS: *operands* | OPTIONS: *options*}**

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 8

**HCP8444E THE 51D DISK MUST BE ACCESSED AS D AND IN R/W MODE**

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 8

**HCP8445E THE {FILEPOOL | DIRECTORY} *filepool_name* IS NOT AVAILABLE**

**User Response:** Start up the VMSERVS file pool and rerun MOVE2SFS.

**Severity:** 8

**HCP8446I THE FOLLOWING COMPONENT(S) WERE ALREADY MOVED TO SFS: *component component ...***

**User Response:** None.

**Severity:** None.

**HCP8448E THE FOLLOWING COMPONENTS HAVE NOT BEEN LOADED FROM THE SYSTEM DDR: *component component ...***

**User Response:** Check that INSTALL was run and the components you are moving to SFS were loaded prior to running MOVE2SFS.

**Severity:** 8

**HCP8449E THE SUBDIRECTORY *subdirectory_name* COULD NOT BE CREATED**

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 8

**HCP8450E ACCESS OF {*mdisk* | *subdirectory_name*} AT FILEMODE *fm* FAILED WITH RC=*rc***

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 8

**HCP8451W VMFERASE FAILED ON SUBDIRECTORY: *subdirectory_name* WITH RC=*rc***

**User Response:** Issue the following commands to update the subdirectory:

1. `ACCESS` *subdirectory-name fm*
2. If the warning occurred when processing AVS, enter:
   `VMFERASE PROD 4VMVMD30%AVS FROM` *fm*
3. If the warning when processing TSAF, enter:
   `VMFERASE PROD 4VMVMH30%TSAF FROM` *fm*

**Severity:** 4

**HCP8452W VM SYSRECS TABLE WAS NOT UPDATED FOR THE FOLLOWING COMPONENT: *component***

**User Response:** Issue the following command to update the VM SYSRECS table:

`PIPE < VM SYSRECS D|CHANGE /ZVM` *component*`/ZVM` *component*`SFS/| > VM SYSRECS D`

**Severity:** 4

**HCP8453I MOVE OF *component* COMPONENT TO SFS COMPLETED SUCCESSFULLY**

**User Response:** None.

**Severity:** 0

**HCP8454E THERE ARE NOT ENOUGH FREE FILEMODES AVAILABLE. TWO ARE REQUIRED**

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 8

**HCP8455W MOVE2SFS EXEC COMPLETED WITH WARNINGS.**

**User Response:** Check the warning messages for each component.

**Severity:** 4

**HCP8456I PROCESSING COMPONENT** *component*

**User Response:** None.

**Severity:** None.

**HCP8457W VM SYSRECS TABLE WAS ALREADY UPDATED FOR** *component*

**User Response:** None.

**Severity:** 4

**HCP8458W** *component* **IS NOT IN THE VM SYSRECS TABLE**

**User Response:** Check that the components you are moving to SFS were loaded from the System DDR (with INSTALL) and that POSTDDR was run prior to running MOVE2SFS.

**Severity:** 4

**HCP8459W MOVE OF** *component* **COMPONENT COMPLETED TO SFS WITH WARNINGS**

**User Response:** Check the warning messages for the component listed.

**Severity:** 4

**HCP8460E WRITE TO** *file* **FAILED WITH RC=***rc*

**User Response:** Correct error and rerun MOVE2SFS.

**Severity:** 8

**HCP8465I THE FOLLOWING MINIDISKS FOR COMPONENTS(S):** *complist* **HAVE BEEN RECLAIMED:** *disk disk ...*

**User Response:** None.

**Severity:** 0

**HCP8466I** *fn* **DIRECT HAS BEEN UPDATED TO COMMENT OUT RECLAIMED MINIDISKS FOR THE MAINT USER ID**

**User Response:** The user specified the RECLAIM option on the MOVE2SFS command. RECLAIM comments out the reclaimed disks in the directory file, but this directory has not been activated due to some failure. The user must put the directory online manually for the changes to go into effect.

**Severity:** 8

**HCP8467I BOTH AVS AND TSAF MUST BE MOVED TO SFS BEFORE THE DISK SPACE CAN BE RECLAIMED**

**User Response:** None.

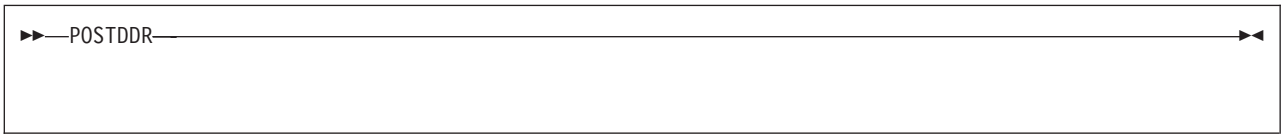
**Severity:** None.

**HCP8470W DETACH OF MINIDISK** *mdisk* **FAILED WITH RC=***rc*

**User Response:** Manually detach the disk to finish reclaiming unused minidisk space. MOVE2SFS processing continues

**Severity:** 4

# POSTDDR




## Purpose

Use POSTDDR to create the system-level Software Inventory tables:

VM SYSRECS
VM SYSDESCT
VM SYSREQT
VM SYSBLDS
VM SYSAPPS.

## Usage Notes

1. POSTDDR is to be run only once, unless additional components are loaded using INSTALL.

## Messages and Return Codes

**HCP8300E FILE *fileID* NOT FOUND**

**User Response:** Correct error and rerun POSTDDR.

**Severity:** 28

**HCP8342E THE COMMAND *command* FAILED WITH RC=*rc***

**User Response:** Check command return codes to determine the cause of the error.

**Severity:** 8

**HCP8408E BASE COMPONENTS ARE NOT LOADED**

**User Response:** INSTALL must be run prior to running POSTDDR.

**Severity:** 8

**HCP8409I Generating Software Inventory files**

**User Response:** None.

**Severity:** 0

**HCP8410E NO DISK IS ACCESSED AS *fm***

**User Response:** Access 191 as your 'A' disk and rerun POSTDDR.

**Severity:** 8

**HCP8411I COULD NOT WRITE TO *fn ft* BECAUSE YOUR 'A' DISK IS FULL**

**User Response:** Correct the full disk condition and rerun POSTDDR.

**Severity:** 8

**HCP8413I }GENERATING SOFTWARE INVENTORY FILE | UPDATE OF VM SYSSUF TABLE} COMPLETED**

**User Response:** None.

**Severity:** 0

**HCP8418I THE SOFTWARE INVENTORY TABLES ARE ALREADY UPDATED**

**User Response:** None.

**Severity:** 0

**HCP8422E ATTEMPT TO QUERY DISK *filemode* FAILED WITH RETURN CODE *rc***

**User Response:**

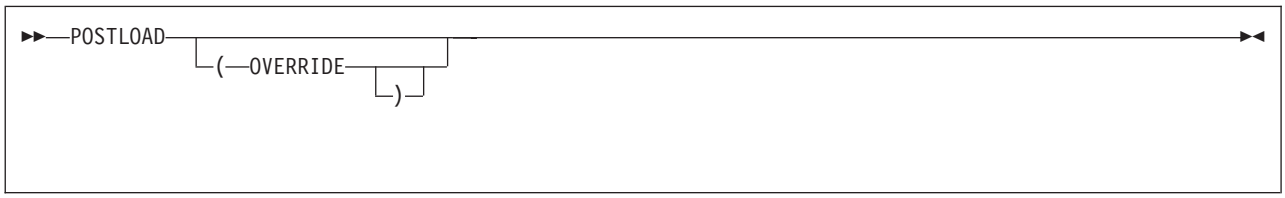
**Severity:** 8

**HCP8431E THE *mdisk* DISK MUST BE IN R/W MODE**

**User Response:** Correct error and rerun POSTDDR.

**Severity:** 8

# POSTLOAD




## Purpose

Use POSTLOAD to perform clean-up tasks depending on the items you have loaded.

## Options

**OVERRIDE**

displays the following menu, which allows you to choose what postload installation tasks you want to bypass.

**Attention:** Bypassing tasks may result in problems.

```
  z/VM POSTLOAD OVERRIDE MENU
   Indicate which procedure(s) you INTEND TO BYPASS by entering a NONBLANK
   CHARACTER next to the function and press PF5 to process
__    Allocate the System Residence Pack
__    Format Skeleton Source Minidisk
__    Remove Server Autolog Statements
__    Cleanup USER DIRECT
__    Bring the updated USER DIRECT online
__    Create the Software Inventory Tables



  PF1 = HELP           PF3/PF12 = QUIT           PF5 = Process
```

## Messages and Return Codes

**HCP8320E DISK *label* NOT BIG ENOUGH TO HOLD *name***

**User Response:** Correct error and rerun POSTLOAD.

**Severity:** 100

**HCP8321E SSL FILE *fn* INSTALLED ON *label***

**User Response:** None.

**Severity:** 0

**HCP8338I NOW EXECUTING *function***

**User Response:** None.

**Severity:** 0

**HCP8339I BYPASSING *function* DUE TO *condition***

**User Response:** A POSTLOAD function requested by the user is being bypassed due to the condition specified in the message. Processing continues.

**Severity:** 99, 0

**HCP8340E THE POSTLOAD FUNCTION *function* FAILED WITH RETURN CODE *rc*. PLEASE CORRECT THE PROBLEM AND RERUN POSTLOAD. ERRORS HAVE BEEN LOGGED IN POSTLOAD $MSGLOG ON THE 2CC DISK**

**User Response:** A POSTLOAD function requested by the user failed with the return code specified in the message. Previous messages describe the error in greater detail. Correct the error and rerun POSTLOAD.

**Severity:** 100

## POSTLOAD

**HCP8341I POSTLOAD FUNCTION** *function* **COMPLETED SUCCESSFULLY**

**User Response:** None.

**Severity:** 0

**HCP8342E THE COMMAND** *command* **FAILED WITH RC=***rc*

**User Response:** A command issued by POSTLOAD failed with the return code specified in the message. Check the command return codes to determine the cause of the error.

**Severity:** 8, 100

**HCP8343E ADDRESS 80A IS NOT AUTOLOG1'S 191 DISK**

**User Response:** The address accessed as virtual address 80A does not belong to user AUTOLOG1. Link to AUTOLOG1's 191 as 80A and rerun POSTLOAD.

**Severity:** 100

**HCP8346I SOURCE MINIDISK** *mdisk* **FOR COMPONENT** *component* **FORMATTED SUCCESSFULLY**

**User Response:** None.

**Severity:** 0

**HCP8348I SOFTWARE INVENTORY FILES VM SYSRECS, VM SYSDESCT, VM SYSREQT, VM SYSBLDS, AND VM SYSAPPS HAVE BEEN CREATED**

**User Response:** None.

**Severity:** 0

**HCP8351E YOU MUST HAVE A R/W DISK ACCESSED AS "A" TO RUN POSTLOAD**

**User Response:** Correct the error and rerun POSTLOAD.

**Severity:** 8

**HCP8352E INVALID {OPERAND(S)** *operand***|OPTION(S)** *option***} SPECIFIED ON THE POSTLOAD COMMAND. PLEASE CORRECT AND REENTER**

**User Response:** Correct the error and rerun POSTLOAD.

**Severity:** 8

**HCP8353W UNDEFINED PFKEY**

**User Response:** Enter correct input

**Severity:** None

**HCP8354W ENTER KEY NOT SUPPORTED FROM THIS PANEL**

**User Response:** Enter correct input

**Severity:** None

**HCP8392I POSTLOAD EXEC ENDED SUCCESSFULLY**

**User Response:** None.

**Severity:** None.

**HCP8401E POSTLOAD EXEC MUST BE RUN ON A FULL SCREEN TERMINAL WITH AT LEAST 16 LINES**

**User Response:** Correct the error and rerun POSTLOAD

**Severity:** 100

**HCP8411I COUND NOT WRITE TO** *log_file* **BECAUSE YOUR 'E' DISK IS FULL. MESSAGE LOGGING HAS BEEN SUSPENDED.**

**User Response:** Correct disk full condition after the command completes. Processing continues without messages written to the log.

**Severity:** None.

**HCP8498W YOUR 2CC DISK IS TOO FULL TO HOLD A POSTLOAD MESSAGE LOG. MESSAGES WILL BE DISPLAYED TO THE CONSOLE.**

**User Response:** Correct disk full condition after command completes. Processing continues without messages written to the log.

**Severity:** None.

# Notices

IBM may not offer the products, services, or features discussed in this document in all 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 10594-1785
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:

IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106, 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 in 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
Mail Station P300
2455 South Road
Poughkeepsie, NY 12601-5400
U.S.A.
Attention: Information Request

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 information 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 of 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 may contain 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 may contain 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 IBM's application 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.

## Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, or other countries, or both:

AIX/ESA
BookManager
DirMaint
DFSMS/VM
ESCON
IBM
IBMLink
Language Environment
Multiprise
MVS
NetRexx
Operating System/2
OS/2
OS/390
OS/400
RACF
S/390
System/370
Tivoli
VM/ESA
VSE/ESA
VTAM
z/OS
z/VM
zSeries

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Other company, product, and service names may be trademarks or service marks of others.

# Glossary

The list of VM terms and their definitions is available through the online HELP Facility. For example, to display the definition of "cms", enter:

```
help glossary cms
```

You will enter the HELP Facility's online glossary file and the definition of "cms" will be displayed as the current line. When you are in the glossary file, you can also search for the other terms.

If you are unfamiliar with the HELP Facility, you can enter:

```
help
```

to display the main HELP Menu, or enter:

```
help cms help
```

for information about the HELP command.

For more information about the HELP Facility, see the *z/VM: CMS User's Guide*. For more information about the HELP command, see the *z/VM: CMS Command and Utility Reference*.

# Bibliography

This bibliography lists the IBM publications that provide information about your z/VM system. The z/VM library includes z/VM base publications, publications for additional facilities included with z/VM, and publications for z/VM optional features. For abstracts of z/VM publications and information about current editions and available publication formats, see *z/VM: General Information*.

## z/VM Internet Library

The latest editions of most z/VM publications are available in Adobe Portable Document Format (PDF) and IBM BookManager® format from the z/VM Internet Library:

`http://www.ibm.com/eserver/zseries/zvm/library/`

The z/VM Internet Library also provides other information about z/VM, such as:

- Program directories
- Data areas and control blocks
- Monitor records

## VM Collection CD-ROM

The *Online Library Omnibus Edition: VM Collection*, SK2T-2067, contains libraries in BookManager format for current IBM VM system products and IBM licensed programs that run on VM. It also contains PDF versions of many of these books.

**Note:** Only unlicensed publications are included.

## z/VM Base Publications

### Evaluation

*z/VM: General Information*, GC24-5991

*z/VM License Information*, GC24-6033

*z/VM: Migration Guide*, GC24-5996

### Installation and Service

*z/VM: Installation Guide*, GC24-5992

*z/VM: Service Guide*, GC24-5993

*z/VM: VMSES/E Introduction and Reference*, GC24-5994

### Planning and Administration

*z/VM: CMS File Pool Planning, Administration, and Operation*, SC24-5949

*z/VM: CMS Planning and Administration*, SC24-6042

*VM/ESA: Connectivity Planning, Administration, and Operation*, SC24-5756

*z/VM: CP Planning and Administration*, SC24-6043

*z/VM: Dynamic I/O Configuration Planning and Administration*, SC24-6044

*z/VM: Group Control System*, SC24-5998

*z/VM: Performance*, SC24-5999

*z/VM: Running Guest Operating Systems*, SC24-5997

*z/VM: Saved Segments Planning and Administration*, SC24-6056

*z/VM: System Administration Facility*, SC24-6034

### Customization

*z/VM: CP Exit Customization*, SC24-5953

### Operation

*z/VM: System Operation*, SC24-6000

*z/VM: Virtual Machine Operation*, SC24-6036

### Application Programming

*z/VM: CMS Application Development Guide*, SC24-6002

*z/VM: CMS Application Development Guide for Assembler*, SC24-6003

*z/VM: CMS Application Multitasking*, SC24-5961

*z/VM: CMS Callable Services Reference*, SC24-6004

*z/VM: CMS Macros and Functions Reference*, SC24-6005

*z/VM: CP Programming Services*, SC24-6001

*VM/ESA: CPI Communications User's Guide*, SC24-5595

*z/VM: Enterprise Systems Architecture/Extended Configuration Principles of Operation*, SC24-5965

*z/VM: OpenExtensions Advanced Application Programming Tools*, SC24-5979

*z/VM: OpenExtensions Callable Services Reference*, SC24-6007

*z/VM: OpenExtensions Command Reference*, SC24-6006

*z/VM: OpenExtensions POSIX Conformance Document*, GC24-5976

*z/VM: OpenExtensions User's Guide*, SC24-6053

*z/VM: Program Management Binder for CMS*, SC24-6057

*VM/ESA: Programmer's Guide to the Server-Requester Programming Interface for VM*, SC24-5455

*z/VM: Reusable Server Kernel Programmer's Guide and Reference*, SC24-5964

*VM/ESA: REXX/VM Primer*, SC24-5598

*z/VM: REXX/VM Reference*, SC24-6035

*z/VM: REXX/VM User's Guide*, SC24-5962

*Common Programming Interface Communications Reference*, SC26-4399

*Common Programming Interface Resource Recovery Reference*, SC31-6821

*Debug Tool User's Guide and Reference*, SC09-2137

*OS/390: DFSMS Program Management*, SC27-0806

### End Use

*z/VM: CMS Command and Utility Reference*, SC24-6010

*z/VM: CMS Pipelines Reference*, SC24-5971

*z/VM: CMS Pipelines User's Guide*, SC24-5970

*VM/ESA: CMS Primer*, SC24-5458

*z/VM: CMS User's Guide*, SC24-6009

*z/VM: CP Command and Utility Reference*, SC24-6008

*z/VM: Quick Reference*, SC24-6011

*z/VM: XEDIT Command and Macro Reference*, SC24-5973

*z/VM: XEDIT User's Guide*, SC24-5972

*CMS/TSO Pipelines: Author's Edition*, SL26-0018

### Diagnosis

*z/VM: Diagnosis Guide*, GC24-6039

*z/VM: Dump Viewing Facility*, GC24-5966

*z/VM: System Messages and Codes - CMS*, GC24-6031

*z/VM: System Messages and Codes - CP*, GC24-6030

*z/VM: System Messages and Codes - Other Components*, GC24-6032

*z/VM: VM Dump Tool*, GC24-6037

## Publications for z/VM Additional Facilities

### DFSMS/VM®

*z/VM: DFSMS/VM Function Level 221 Customization*, SC24-6047

*z/VM: DFSMS/VM Function Level 221 Diagnosis Guide*, GC24-6046

*z/VM: DFSMS/VM Function Level 221 Messages and Codes*, GC24-6048

*z/VM: DFSMS/VM Function Level 221 Planning Guide*, SC24-6049

*z/VM: DFSMS/VM Function Level 221 Removable Media Services*, SC24-6050

*z/VM: DFSMS/VM Function Level 221 Storage Administration*, SC24-6051

### Language Environment®

*z/VM: Language Environment 1.8 C Run-Time Library Reference*, SC24-6038

*Language Environment for OS/390 & VM: Concepts Guide*, GC28-1945

*Language Environment for OS/390 & VM: Debugging Guide and Run-Time Messages*, SC28-1942

*Language Environment for OS/390 & VM: Programming Guide*, SC28-1939

*Language Environment for OS/390 & VM: Programming Reference*, SC28-1940

*Language Environment for OS/390 & VM: Run-Time Migration Guide*, SC28-1944

*Language Environment for OS/390 & VM: Writing Interlanguage Communication Applications*, SC28-1943

### OSA/SF

*VM/ESA: Open Systems Adapter Support Facility User's Guide for OSA-2*, SC28-1992

*S/390: Open Systems Adapter-Express Customer's Guide and Reference*, SA22-7403

*S/390: Planning for the S/390 Open Systems Adapter (OSA-1, OSA-2) Feature*, GC23-3870

*zSeries 900: Open Systems Adapter-Express Customer's Guide and Reference*, SA22-7476

*zSeries 900: Planning for the Open Systems Adapter-2 Feature*, GA22-7477

### TCP/IP for z/VM

*z/VM: TCP/IP Level 430 Diagnosis Guide*, GC24-6023

*z/VM: TCP/IP Level 430 Messages and Codes*, GC24-6022

*z/VM: TCP/IP Level 430 Planning and Customization*, SC24-6019

*z/VM: TCP/IP Level 430 Programmer's Reference*, SC24-6021

*z/VM: TCP/IP Level 430 User's Guide*, SC24-6020

## Publications for z/VM Optional Features

### DirMaint™

*z/VM: Directory Maintenance Facility Function Level 410 Command Reference*, SC24-6025

*z/VM: Directory Maintenance Facility Function Level 410 Messages*, GC24-6026

*z/VM: Directory Maintenance Facility Function Level 410 Tailoring and Administration Guide*, SC24-6024

### PRF

*z/VM: Performance Reporting Facility Function Level 410*, SC24-6027

### RTM

*z/VM: RealTime Monitor Function Level 410*, SC24-6028

### RACF® for VM

*RACF: Auditor's Guide*, SC28-1342

*RACF: Command Language Reference*, SC28-0733

*RACF: Command Language Reference Summary*, SX22-0014

*RACF: Diagnosis Guide*, GY28-1016

*RACF: General Information*, GC28-0722

*RACF: General User's Guide*, SC28-1341

*RACF: Macros and Interfaces*, SC28-1345

*RACF: Messages and Codes*, SC38-1014

*RACF: Migration and Planning*, GC23-3054

*RACF: Security Administrator's Guide*, SC28-1340

*RACF: System Programmer's Guide*, SC28-1343

*External Security Interface (RACROUTE) Macro Reference for MVS and VM*, GC28-1366

# Index

# L



# M



# O



# P



# Q



# R



# S

## T



## U



## V



## W



## Z

# Readers' Comments — We'd Like to Hear from You

**z/VM™**
**Installation Guide**
**Version 4 Release 3.0**

**Publication No. GC24-5992-02**

**Overall, how satisfied are you with the information in this book?**

| | Very Satisfied | Satisfied | Neutral | Dissatisfied | Very Dissatisfied |
|---|---|---|---|---|---|
| Overall satisfaction | ☐ | ☐ | ☐ | ☐ | ☐ |

**How satisfied are you that the information in this book is:**

| | Very Satisfied | Satisfied | Neutral | Dissatisfied | Very Dissatisfied |
|---|---|---|---|---|---|
| Accurate | ☐ | ☐ | ☐ | ☐ | ☐ |
| Complete | ☐ | ☐ | ☐ | ☐ | ☐ |
| Easy to find | ☐ | ☐ | ☐ | ☐ | ☐ |
| Easy to understand | ☐ | ☐ | ☐ | ☐ | ☐ |
| Well organized | ☐ | ☐ | ☐ | ☐ | ☐ |
| Applicable to your tasks | ☐ | ☐ | ☐ | ☐ | ☐ |

**Please tell us how we can improve this book:**

Thank you for your responses. May we contact you? ☐ Yes ☐ No

When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute your comments in any way it believes appropriate without incurring any obligation to you.

Name _____ Address _____

Company or Organization _____

Phone No. _____

**Readers' Comments — We'd Like to Hear from You**
GC24-5992-02

IBM

Cut or Fold
Along Line

Fold and Tape | **Please do not staple** | Fold and Tape

NO POSTAGE
NECESSARY
IF MAILED IN THE
UNITED STATES

# BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 40 ARMONK, NEW YORK

POSTAGE WILL BE PAID BY ADDRESSEE

IBM Corporation
Information Development
Department G60G
1701 North Street
Endicott, New York
13760-5553

Fold and Tape | **Please do not staple** | Fold and Tape

GC24-5992-02

Cut or Fold
Along Line

File Number: S370/S390-34
Program Number: 5739-A03

Printed in the United States of America
on recycled paper containing 10%
recovered post-consumer fiber.

GC24-5992-02

Spine information:

z/VM Installation Guide Version 4 Release 3.0