IBM

IBM Virtual Machine/
Interactive Productivity
Facility Release 5

System Reference

Diagram showing OPERATOR, ADMINISTRATOR, and GENERAL USER roles connected to manuals:

- SC24-5230 ADMINISTRATION GUIDE
- SC24-5234 ADMINISTRATION MESSAGES
- SC24-5228 SYSTEM REFERENCE
- SC24-5231 PROBLEM CONTROL
- SC24-5233 GENERAL USE GUIDE
- SC24-5232 GENERAL USE MESSAGES
- SC24-5229 OPERATION

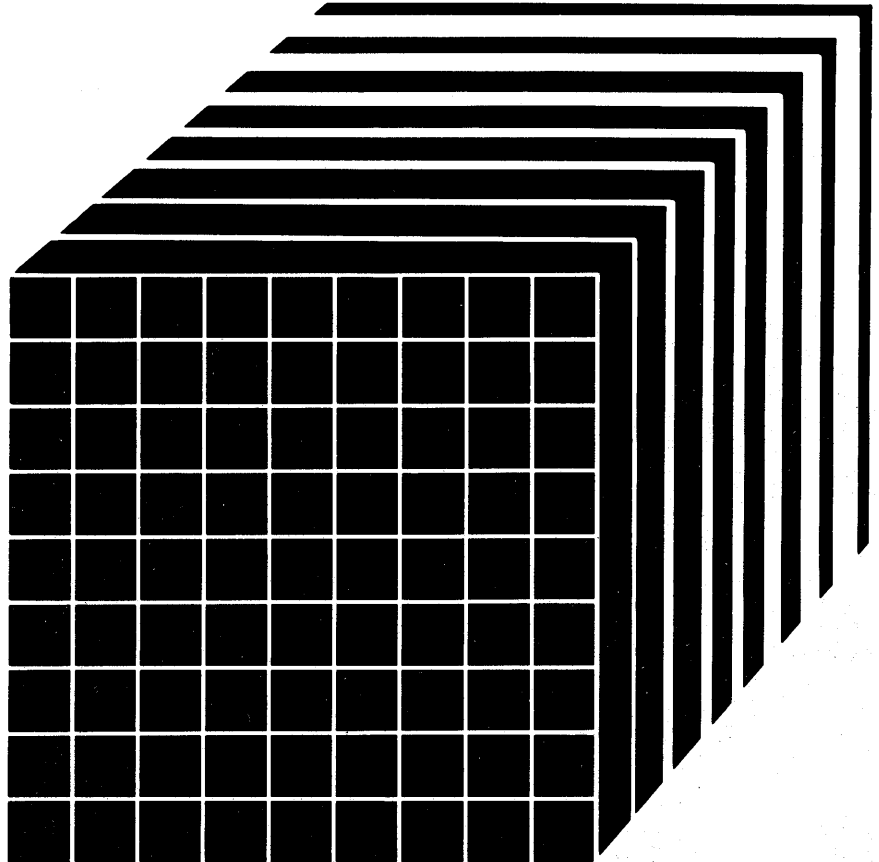|	
SC24-5230	**VM/Interactive Productivity Facility Release 5 Administration Guide** How to use the IPF dialogs to manage users on the system and to manage the directory, accounting, minidisks and communication links.
SC24-5234	**VM/Interactive Productivity Facility Release 5 Administration Messages** This companion volume contains administrator message explanations.
SC24-5228	**VM/Interactive Productivity Facility Release 5 System Reference** How to plan for and install IPF. It lists the IPF modules and EXECS, and all IPF panels by ID and title. It describes two dialogs for system support and RSCS.
SC24-5231	**VM/Interactive Productivity Facility Release 5 Problem Control** How to use problem control facility dialogs to report and track problems, and explains how system control abnormal end problems are automatically reported.
SC24-5233	**VM/Interactive Productivity Facility Release 5 General Use Guide** How to use the IPF dialogs for CMS type functions, to get to application programs, or to get to programming resources.
SC24-5232	**VM/Interactive Productivity Facility Release 5 General Use Messages** This companion volume contains general use message explanations.
SC24-5229	**VM/Interactive Productivity Facility Release 5 Operation** How to use the IPF dialogs to start up, operate, and shut down the system; and manage system resource and communications. Contains operator message explanations.

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System Reference

Preface

Virtual Machine/Interactive Productivity Facility (VM/IPF) release 5 is a program product that runs under the IBM Virtual Machine/System Product (VM/SP) release 2 or 3.

This book is intended for the system programmer of VM/IPF. To use this book, you should already have some knowledge of:

- CMS
- The hardware your system uses (the device types, model numbers, and so forth)
- What a virtual machine is
- What it means to service VM/IPF
- What a network is.

The book is divided into five major sections.

Part 1 - Introduction

    Chapter 1 - What You Need to Know About Panels

Part 2 - describes the planning and installation of VM/IPF.

    Chapter 2 - Planning
    Chapter 3 - Installation

Part 3 - describes the components of IPF run under the userid of MAINT.

    Chapter 4 - System Support
    Chapter 5 - RSCS (Remote Spooling Communications Subsystem)
    Chapter 6 - Error Messages

Part 4 - IPF modules and execs that are used by VM/IPF to do many of its services.

    Chapter 7 - IPF Modules and Execs

Part 5 - lists all the task panels contained within VM/IPF and a panel hierarchy for the System Support and RSCS dialogs.

    Chapter 8 - List of Panels by Panelids
    Chapter 9 - List of Panels by Titles
    Chapter 10 - Panel Hierarchies

Other Books In This Library:

IBM Virtual Machine/Interactive Productivity Facility:

Operation, SC24-5229
Administration Guide, SC24-5230
Problem Control, SC24-5231
General Use Messages, SC24-5232
General Use Guide, SC24-5233
Administration Messages, SC24-5234.

Other Books You May Need:

IBM Virtual Machine/System Product:

Data Areas and Control Block Logic, LY20-0891
Planning Guide and Reference, SC19-6201
Planning and System Generation Guide, ST00-0916
Operator's Guide, SC19-6202
System Programmer's Guide, SC19-6203
System Messages and Codes, SC19-6204
CMS Command and Macro Reference, SC19-6209
CMS User's Guide, SC19-6210
CP Command Reference for General Users, SC19-6211
EXEC2 Reference Guide, SC24-5219
System Product Editor Command and Macro Reference, SC24-5221
Installation Guide, SC24-5237
Directory Maintenance:
    General Information, GC20-1836
    Installation and System Administration Guide, SC20-1840
Remote Spooling Communications Subsystem Networking
    General Information, GH24-5004
    Program Reference and Operations Manual, SC24-5005
Interactive Problem Control System Extended
    General Information, GC24-2019
    User's Guide and Reference, SC34-2020
System Installation Productivity Option/Extended
    Planning Guide, GC20-1874

Interactive Instructional Presentation System/Interactive Instructional Authoring System Operations Guide, SH20-2459

Interactive System Productivity Facility

General Information, GC34-2078
Installation and Customization, SC34-2083

IBM 3704 and 3705

Communications Controllers Principles of Operation, GC30-3004
Control Program Generation and Utilities Guide and Reference Manual, GC30-3008.

Contents

Figures

VM/IPF is a program product that consists of several panels you can use to do many tasks. The purpose of this book is to provide planning and installation information for IPF and to describe the panels a system programmer can use to make the tasks easier.

The book provides an aid to the system programmer. Only those tasks which are run under the userid of MAINT are discussed in this manual, namely System Support and Remote Spooling Communications Subsystem Networking (RSCS).

MAINT is a privileged userid. Users logged on as MAINT are allowed to do tasks and to apply services not allowed by the general user, the Operator, or by the Administrator. System Support and RSCS are tasks that are designed for a system programmer.

In addition to the above information, this manual contains a description of modules and execs used by IPF to do many of its tasks and services, and a list of all the data entry and menu panels IPF uses.

Chapter 1. What You Need to Know About Panels

VM/IPF is a program product that consists of several panels you can use to do many tasks. One purpose of this book is to describe panels a system programmer can use to make the tasks easier.

The panels shown in this book are the menu and data entry panels you would use to do the specified tasks.

Menu panels give you a list of tasks to choose from.

Data entry panels ask you to fill in information.

Each task has what is called a primary menu panel. This is the highest level of a menu panel for a given task. It lists all the tasks that you can choose from for that particular dialog. You will know a menu panel is a primary panel if you see the word "Primary" in the upper right corner of the panel.

In all the panels reproduced in this book, you will see a "panelid" in the upper left corner of the panel. A panelid is a one- to eight-character "name" for a panel. To see a panelid, type

    PANELID ON

or

    PANELID

on the command line of any panel and press the ENTER key. You will see the panelid for that panel in the upper left corner. After typing this command, you will see the panelid for *every* panel.

If you do not want to see the panelid anymore, type

    PANELID OFF

on the command line of any panel and press the ENTER key.

To make it easier for you to get to the task you want, there are "panel maps." Panel maps show you how to get from a primary menu panel to a task. You will see them in the left margin of the page.

Part 2. Installation and Planning

Chapter 2. Planning

This chapter discusses requirements and considerations you need to be aware of before you can install VM/IPF. It is assumed that you are familiar with VM terminology, components, and operation. In addition, you need to have a working knowledge of the VM/SP Control Program (CP) and Conversational Monitoring System (CMS).

Hardware Requirements

The minimum hardware requirements needed to install VM/IPF release 5 are shown in the following figure. Under DASD Types, the specified blocks are FB-512.

MACHINE TYPE	MINIMUM REQUIRED	NOTES
PROCESSOR A processor supported by VM/SP release 2 or 3	1	
STORAGE Megabytes	1.0	
DASD TYPES 3310 3330 3340 3350 3370 3375 3380	37,180 blks 96 cyls 232 cyls 53 cyls 37,180 blks 72 cyls 51 cyls	1 1 1 1 1 1 1
CONSOLES Any console supported by VM/SP release 2 or 3	1	
TERMINALS 3277, 3278, 3279	1	
TAPE DRIVES Any tape drive supported by VM/SP release 2 or 3	1	
PRINTERS 1403, 3211, 3289-4, 3203-4, 3203-5, 3262	1	

Figure 1. Hardware Requirements for VM/IPF Release 5

Notes:

1. This number does not take into account the DASD space requirements for any of the corequisite and optional program products listed under "Software Requirements" on page 5.

Software Requirements

To use the program products listed in this section, the products must be installed using the methods supplied with each product.

1. The following list contains prerequisite program products for VM/IPF release 5.

PROGRAM PRODUCT	NUMBER	RELEASE
Virtual Machine/System Product[1] (VM/SP)	5664-167	2 or 3
Interactive System Productivity Facility (ISPF)	5668-960	1.0

Notes.

The userid of the disconnected service machine must be ISPVM.
The ISPF code must be installed on the ISPVM 192 disk.
The ISPVM 192 disk must have a read password of RISPF.
The ISPVM userid must have a 191 disk defined.

2. The following list contains corequisite program products for which VM/IPF release 5 provides supporting dialogs. In order to use these dialogs, the following program products must be installed.

PROGRAM PRODUCT	NUMBER	RELEASE
VM/Directory Maintenance (DIRMAINT)	5748-XE4	2.0
Document Composition Facility (DCF)	5748-XX9	2.0
370X Emulator Program (EP/VS)	5744-AN1	3.0
VM/Interactive Problem Control Service Extended (IPCS/E)	5748-SA1	2.0
VM/Remote Spooling Communications System Networking (RSCS)	5748-XP1	3.0

---

[1]   Refer to "Notes on Installation of Other Products" on page 6 for Y-disk requirement.

3. The following list contains optional program products for which VM/IPF release 5 provides no supporting dialogs. VM/IPF release 5 simply invokes these program products.

PROGRAM PRODUCT	NUMBER
A Departmental Reporting System II (ADRS II)	5796-PLN
APL Data Interface II (APLDI II)	5796-PNG
Display Management System/CMS (DMS/CMS)	5748-XXB
Financial Planning System II (FPS II)	5798-DCN
Graphical Data Display Manager & Presentation Graphics Feature (GDDM & PGF)	5748-XXH
Interactive Instructional Authoring System (IIAS)	5668-011
Interactive Instructional Presentation System (IIPS)	5668-012
ISPF/Program Development Facility (ISPF/PDF)	5664-172
Query-by-Example (QBE)	5796-PKT
VS APL	5748-AP1
VS BASIC	5748-XX1

Notes on Installation of Other Products

The following section describes the requirements for those program products listed in "Software Requirements" on page 5. This section includes verifying that certain files exist on specified disks. To verify that a file exists, issue the following command:

```
FILELIST fn ft fm
```

where

fn is the filename of the file you want to verify exists

ft is the filetype of the file you want to verify exists

fn is the mode of the disk where you want to verify the file is located on.

If the file does exist, it will be listed for you.

Log on to the MAINT userid.

- Virtual Machine/System Product (VM/SP), 5664-167

  This product must be installed as documented in the:

  VM/SP Planning and System Generation Guide (if using VM/SP release 2)
  VM/SP Installation Guide (if using VM/SP release 3).

  The MAINT 19E minidisk must be specified as the **Y-disk** address in generating the CMS nucleus.

  The SYSTEM NETID file **must** exist on the MAINT 190-S disk.

  If the SYSTEM NETID S file does not exist, you must create it. Refer to the section on page 44 describing the SYSTEM NETID for more information about how to create this file.

  Log off the MAINT userid.

- Interactive System Productivity Facility (ISPF), 5668-960

  This product must be installed as documented in *Interactive System Productivity Facility Installation and Customization*.

  The name of the shared segment must be ISPDCSS. This segment is recommended to be located just above the 8192K boundary. The ISPMOD MODULE must be generated in order to invoke VM/IPF in a machine larger than 8192K.

  The userid of the disconnected service machine must be ISPVM. The ISPF code must be installed on the ISPVM 192 disk. The ISPVM 192 disk must have a read password of RISPF. The ISPVM userid must have a 191 disk defined.

  Any variation from these expectations requires modification of the @CNTL2@ line in the IPFFIPF DEFAULT2 file on the MAINT 310 disk. (This file is shown in Figure 4 on page 55.)

  For additional information on setting up the ISPVM virtual machine, refer to the *Interactive System Productivity Facility Installation and Customization* manual.

- VM/SP Directory Maintenance (DIRMAINT), 5748-XE4

  This product must be installed as documented in the *VM/SP Directory Maintenance Installation and System Administrator's Guide*.

  Log on to the DIRMAINT userid, using the NOIPL parameter. Issue the following commands:

  ```
  Ipl CMS
  ACCess (NOPROF
  ACCess 195 C
  ```

  The DIRMAINT EXEC file and DIRMAINT DATA file must be located on the MAINT 319 disk.

The userid of the disconnected service machine must be DIRMAINT. Read passwords must be defined for the DIRMAINT 191 and 195 disks. The read password for the DIRMAINT 195 disk must be included in the DIRECT PARMS file found on the SYSDUMP1 191 disk.

Verify that the 191 disk contains an EXTENT CONTROL file. This file should contain an entry for each physical DASD device. Each volume on which automatic minidisk allocation is to be performed (whether it be automatically by volume serial number or by group name) must be properly defined in the MDISK section.

The extents specified should begin at cylinder 0 for Count Key Data (CKD) devices, and at block 0 for FB-512 devices. The extents should include the entire device. If automatic allocation by group name is to be used, then the GROUP subsection of this file must be set up with at least one group. Each group must contain at least one volume.

Verify that the 195 disk contains the USER DIRECT file. The USER DIRECT file must contain an entry for the $ALLOC$ userid. Verify that the $ALLOC$ userid contains MDISK statements for cylinder 0 of each CKD device and blocks 0 through 15 for each FB-512 device defined in the EXTENT CONTROL file.

Also, verify that some userid contains an entry for other DASD space that is not available for allocation. This space includes the CP nucleus, system directory, warm start data set, checkpoint data set, error recording area, paging and spool file space, and temporary disk space. The userid that "owns" this disk space should have a password of NOLOG, and should not have a console defined.

Log off the userid DIRMAINT.

- Document Composition Facility (DCF), 5748-XX9

  The name of the command used to invoke DCF must be SCRIPT. (The SCRIPT MODULE file must be installed.)

  The Generalized Markup Language (GML) capabilities must be available through the use of the SSPROF SCRIPT file and the GML2 MACLIB file.

- 370x Emulator Program (EP/VS), 5774-AN1

  VM/IPF release 5 requires that you use either the System IPO/Extended EP/VS program product tape for VM/SP release 2, or the VM/SP EP/VS Feature Program Product tape for VM/SP release 3.

- Interactive Problem Control System Extended (IPCS Extended), 5748-SA1

  This product must be installed as documented in the *Interactive Problem Control System Extended User's Guide and Reference.*

- Remote Spooling Communications System Networking (RSCS), 5748-XP1

  This product must be installed as documented in the *Remote Spooling Communications System Networking Program Reference and Operations Manual.*

The userid of the disconnected service machine must be RSCS.

The VM/IPF release 5 RSCS dialog requires that the RSCS DIRECT file and the PROFILE RSCS file exist on the RSCS 191 disk.

Log on to the RSCS userid using the NOIPL parameter. Issue the following commands:

```
Ipl CMS
ACCess (NOPROF
```

Make sure that the 191 disk is accessed as the A-disk.

Verify that the 191 disk contains the PROFILE RSCS file. Also, verify that the 191 disk contains the RSCS DIRECT file. VM/IPF release 5 requires that the following entries be in the RSCS DIRECT file:

```
AUTH * ADMIN    *
AUTH * MAINT    * CP
AUTH * OP1      *
AUTH * OPERATOR *
DUMP VM OPERATNS
MSGNOH
```

Note: There must be an AUTH statement for all system privileged userids from which the VM/IPF release 5 RSCS dialog can be run.

Log off the RSCS userid.

- A Departmental Reporting System II (ADRS II), 5796-PLN

  The ADR$PLIB MACLIB file must contain the ADR$ panel. This panel must be in ISPF format.

- APL Data Interface II (APLDI II), 5796-PLG

  The ADI$PLIB MACLIB file must contain the ADI$ panel. This panel must be in ISPF format.

- Display Management System/CMS (DMS/CMS), 5748-XXB

  The name of the command used to invoke DMS/CMS must be PANEL. (The product code must include the PANEL MODULE file.)

- Financial Planning System II (FPS II), 5748-DCN

  The product code must include the FPS$FUN EXEC file.

- Graphical Data Display Manager and Presentation Graphics Feature (GDDM & PGF), 5748-XXH

The product code must include the following files:

ADMPLIB	TXTLIB
ADMGLIB	TXTLIB
ADMRLIB	TXTLIB
ADMNLIB	TXTLIB
ADMCHART	MODULE
ADMISSE	MODULE
ADMOPUV	MODULE
ADMVSSE	MODULE

Note: If the ADMGLIB TXTLIB and the ADMPLIB TXTLIB have been combined then the two files will be listed as one with the filename of ADMGPLIB TXTLIB.

- Interactive Instructional Authoring System (IIAS), 5668-011

  The IIAS product code must be installed on the IIPS 192 disk. The name of the command used to invoke IIAS must be IIS. (The product code must include the IIS MODULE file.)

  Any existing courses to be modified must exist on the IIPS 193 disk. New courses will also be placed on the IIPS 193 disk.

- Interactive Instructional Presentation System (IIPS), 5668-012

  The IIPS product code must be installed on the IIPS 192 disk. The name of the command used to invoke IIPS must be IIS. (The product code must include the IIS MODULE file.)

  All courses to be taken must exist on the IIPS 193 disk.

- ISPF/Program Development Facility (ISPF/PDF), 5664-172

  The ISR$PLIB MACLIB file must contain the ISR@PRIM panel. The ISP$PLIB MACLIB file must contain the ISP@PRIM panel. These panels must be in ISPF format.

- Query-by-Example (QBE), 5796-PKT

  The QBE$PLIB MACLIB file must contain the QBE$ panel. This panel must be in ISPF format.

- VS APL, 5748-AP1

  The command used to invoke VS APL is:

  ```
  APL SM(OFF) SHRSIZE(30K) WSSIZE(400K)
  ```

  (The product code must include the APL MODULE file.)

- VS BASIC, 5748-XX1

  The name of the command used to invoke VS BASIC must be VSBASIC. (The product code must include the VSBASIC MODULE file.)

System Generation Requirements

DMKSYS Requirements

The following entries must be defined in the SYSOPR and SYSACNT macros in the CP System Control File (DMKSYS):

```
SYSOPR     SYSDUMP=OPERATNS

SYSACNT    USERID=DISKACNT,                              X
           OUTPUT=READER,                                X
           CLASS=C,                                      X
           LIMIT=100
```

If you make any changes to the DMKSYS file, you must GENERATE (or assemble) DMKSYS only. Refer to the *Planning and System Generation Guide* for details on this generation.

DMKRIO Requirements

VM/IPF release 5 has no special requirements for the Real I/O Configuration File (DMKRIO).

DMKSNT Requirements

The following shared segments must be defined in the System Name Table File (DMKSNT):

- the named system for CMS

- the named system for CMSL

- the CMSDOS shared segment

- the CMSSEG shared segment, if running on VM/SP release 2

- the ISPDCSS shared segment used by ISPF

- the shared segments needed by any of the corequisite or optional program products that are installed

The following are procedures for creating a discontiguous shared segment (DCSS) for ISPF.

Note: You need to be logged onto the MAINT userid and be linked to the ISPVM 192 disk whenever you want to make changes to the DMKSNT.

1. Generate an entry in the DMKSNT system name table for the ISPF DCSS area. This operation requires an assemble of DMKSNT, a SYSGEN of the CP nucleus, and a re-IPL of VM/SP.

The following is a sample DMKSNT entry as supplied by ISPF.

```
SAMPLE NAMESYS SYSNAME=ISPDCSS,      ('SHARED SEGMENT NAME')
               SYSSIZE=384K,         (CURRENT SIZE)
               SYSPGCT=96,           (96 PAGES AT 4K = 384K)
               SYSPRNM=(768-863),    (ASSUMING 3M (300000-X) START ADDR)
                                     (768 x 4,096 = 3,145,728 = 3M)
               SYSSHRSG=(48,49,50,51,52,53)   (ASSUMING 3M STARTING ADDR)
                                     (48 x 65,536 = 3,145,728 = 3M)
               VSYSADR=IGNORE,       (6 SEGMENTS AT 64K = 384K)
               SYSVOL=VMSPF1,        (PER INSTALLATION)
               SYSSTRT=(XXX,YY)      (PER INSTALLATION)
```

Figure 2. Sample DMKSNT Entry for ISPF

2. Create and save the shared system. You will want to use the ISPSAVE EXEC to do this.

    ISPSAVE must be run from a virtual machine which has class E privilege and which has at least 4 megabytes of virtual storage.

    The ISPSAVE EXEC must be changed to agree with the ORIGIN used in DMKSNT. If the ORIGIN address is increased, more than 4 Meg of virtual storage may be needed to run ISPSAVE.

    Note: The execution machine size must be equal to or less than the origin address.

    If you have installed ISPF or made changes to files on ISPVM's 192 disk, you need to resave the ISPDCSS shared segment.

    If a system name other than ISPDCSS is chosen, specify this system name as the first (and only) parameter to the ISPSAVE EXEC. (The ISPSTART, ISPF, and PDF EXECs must also be changed to reflect the new name). If no parameter is specified, the default is ISPDCSS.

System Directory (DASD) Requirements

Required Userids

In order for the VM/IPF release 5 dialogs to execute successfully, certain userids must be included in the system directory. This section gives a brief description of these userids.

Disconnected Virtual Machines

VM/IPF release 5 relies on several userids running as disconnected virtual machines to provide frequently used services. These disconnected virtual machines and their associated functions are:

1. AUTOLOG1

    VM/SP automatically logs on this virtual machine when the VM/SP system is IPLed. The PROFILE EXEC for this userid can therefore be used to automatically perform any actions that may be desired every time the system is IPLed. Typically, this includes automatically logging on any other disconnected virtual machines, enabling lines and/or starting printers, etc.

2. CMSBATCH

   CMSBATCH is used to better utilize system and personnel resources.
   Processor intensive jobs may be routed to CMSBATCH, thus freeing the user's
   terminal for more interactive work and preventing processor intensive jobs
   from bogging down the system. For more information about the CMSBATCH
   virtual machine, refer to the *VM/SP CMS User's Guide* and the *VM/SP
   System Programmer's Guide.*

3. CPRM

   The CPRM (Central Problem Report Manager) userid is required by the
   VM/IPF release 5 Problem Control Facility (PCF). This disconnected service
   machine has the authority to control and change the problem data base.

   Disks associated with the CPRM userid are as follows:

   CPRM 191   is used as a work disk.

   CPRM 192   contains problem reports submitted and updated by users,
                   problem reports created as the result of a dump, and control
                   files.

   CPRM 291   contains files required for execution of the VM/IPF release 5
                   Problem Control Facility dialogs.

4. DATAMOVR

   The DATAMOVR virtual machine is defined to automate the process of
   copying user CMS minidisks and cleaning old minidisks prior to making them
   available for subsequent allocation.

5. DIRMAINT

   The DIRMAINT virtual machine owns the CP directory source and associated
   control files. DIRMAINT makes changes to the CP directory source so that
   users do not have to edit the file manually.

6. DISKACNT

   DISKACNT provides for the collection of accounting information generated
   by VM/SP.

7. ISPVM

   ISPVM is required to run ISPF. ISPVM is to be run in the disconnected state,
   and should be logged on at system IPL time using the AUTOLOG1 virtual
   machine.

8. OPERATNS

The OPERATNS userid is required by the VM/IPF release 5 Problem Control Facility (PCF). All IPCS Extended problems are sent to this userid, which provides standard IPCS Extended services. All CP system dumps are also sent to OPERATNS, due to the "SYSDUMP=OPERATNS" entry in the DMKSYS.

Disks associated with the OPERATNS userid are as follows:

OPERATNS 191   is used as a work disk to process dump files.

OPERATNS 193   contains one current dump and all of the previous reports generated through use of the VM/IPF release 5 Problem Control Facility dialogs.

For more information about the OPERATNS virtual machine, refer to the:

VM/SP Planning and System Generation Guide (if using VM/SP release 2)
VM/SP Planning Guide and Reference (if using VM/SP release 3).

9. RSCS

RSCS runs in a single virtual machine as a telecommunications subsystem for the VM/SP system. It requires a standard VM/SP virtual machine with telecommunications facilities attached to that virtual machine. Normal operation can be conducted without operator intervention, and RSCS is run disconnected.

10. SYSDUMP1

The SYSDUMP1 virtual machine handles the DASD volume backups, either on a specified schedule, or as requested by an Administrator or the Operator. This virtual machine also provides services for restoring a specified user's CMS files from backup tapes.

11. VMUTIL

The VMUTIL virtual machine handles a variety of tasks that occur repeatedly, on a schedule selected by the installation. Some examples of these tasks might include:

- Scheduling periodic DASD volume backups
- Repeating a tape mount request periodically

Other Userids

In addition to those userids that run as disconnected virtual machines, there are a number of other userids that must be included in the system directory. These userids and their associated functions are:

1. ADMIN

The ADMIN userid is reserved for the system administrator. The system administrator's tasks include authorizing users of the system and controlling the

allocation of system resources (primarily DASD). These functions are supported by the VM/IPF release 5 Dirmaint, Problem Control Facility, and Tailoring dialogs.

2. $ALLOC$

The $ALLOC$ userid "owns" disk space on each DASD volume that the system uses to store allocation data. This space is cylinder 0 on each CKD device, and blocks 0-15 on each FB-512 device.

3. IIPS

The IIPS userid controls the instructional system invoked by VM/IPF release 5. Minidisks associated with the IIPS userid are as follows:

IIPS 191   is used for workspace, registering students, etc.

IIPS 192   contains the IIPS licensed program.

IIPS 193   contains all "teachware."

4. MAINT

The MAINT userid is traditionally used by the system programmer to perform system maintenance activities. These functions are supported by the VM/IPF release 5 System Support, RSCS, DIRMAINT, and Tailoring dialogs. If the system programmer does other work on the system, establish another userid for this activity, reserving the MAINT userid for system updates and maintenance.

This userid "owns" all of the system files. Disks associated with the MAINT userid are as follows:

MAINT 123   is used to format or backup the entire VMSRES pack and to re-write the CP nucleus.

MAINT 124   is used to format or backup the entire VMSEXT pack.

MAINT 125   is used to format or backup the entire VMPK01 pack.

MAINT 126   is used to format or backup the entire VMSTGE pack.

MAINT 190   is the CMS system disk. The CMS nucleus and all of the CMS TEXT decks are located here. MAINT 190 is linked by all CMS users as their 190 disk.

MAINT 191   is the workspace and location of tailored VM/SP files.

MAINT 194   is the location of TEXT decks and MACLIBs required to generate the CP nucleus.

MAINT 19D   is the location of files containing explanations of CP, CMS, and XEDIT commands that are used by the CMS HELP facility. MAINT 19D is linked by all CMS users as their 19D disk.

MAINT 19E	is the CMS system extension disk. All of the VM/IPF release 5 General User execs and functions are kept here. MAINT 19E is linked by all CMS users as their 19E disk.
MAINT 293	is the location of AUX and update files used for CMS service.
MAINT 294	is the location of AUX and update files used for CP and RSCS service.
MAINT 300	is the location of all of the execs and functions that belong to the VM/IPF release 5 System Support, Administration, and Operation dialogs.
MAINT 310	is the location of the MACLIBs that belong to VM/IPF release 5. These MACLIBs contain all of the VM/IPF release 5 panels and message line messages. MAINT 310 is also the location of the CLRSCRN MODULE, IPFFIPF DEFAULT2, and RGGLLIB LOADLIB files.
MAINT 319	is the location of the optional feature program products.
MAINT 31A	is the location of the locally installed licensed programs and the locally written application programs.
MAINT 325	is the location of the featured Field Developed Programs (FDPs) and Installed User Programs (IUPs).
MAINT 393	is the location of the source for the CMS portion of VM/SP.
MAINT 394	is the location of the source for the CP portion of VM/SP.
MAINT 3A0	is the location of an online document named "IPF Module/EXEC Guide" which is shipped with VM/IPF release 5. Guides shipped with other program products are also kept here.

5. OPERATOR and OP1

The OPERATOR and OP1 userids are used by the Operator to control the system. If the VM/IPF release 5 Operation dialogs are run on the OPERATOR userid, any system and user messages that are sent to the Operator will be displayed only when the user presses the ENTER key or otherwise clears the screen. To avoid these interruptions, you can log onto the OP1 userid at a terminal and run the Operator dialogs from there. The OPERATOR userid can then be logged onto the console and reserved for system and user messages.

Directory Entries

By convention, all virtual unit record devices are on virtual channel 0. All VM/SP system disks are on virtual channel 1. All disks owned by any given virtual machine are on virtual channels 1 and 2. Device addresses unique to VM/IPF release 5 are on virtual channel 3. Most directory links to other machines' disks are on virtual channel 4. Most dynamic links to other machines' disks are on virtual channel 5.

The directory entries listed below are a **sample** of the entries required to install VM/IPF release 5. The directory entries for all of the program products (except VM/SP) listed in "Software Requirements" on page 5 are not included here. If you plan to install any of these program products, you should refer to the installation documentation for the program product that you are installing to see if any additional directory entries are required.

If you make any changes to the directory, you must put the new directory online. The following are the procedures you need to follow to create and add a new user to the directory, or to change an existing entry and then put the new directory online.

Logon to the MAINT userid.

If DIRMAINT is installed do the following:

1. For an already existing directory entry that you want to change:

   - Issue the command:

     DIRM GET xxxxxxxx

     where:

     > xxxxxxxx is the userid you want to take out of the directory and change.
     >
     > A copy of this user's directory will be sent to MAINT's reader. You will need to read in the file before you can make any changes to it.

   - Xedit that directory entry and make whatever changes needed.
   - Issue the command:

     DIRM REPlace xxxxxxxx

     where:

     > xxxxxxxx is the userid of the entry you want placed back into the directory.

2. To create a new entry and add it to the directory:

   - Issue the following command:

     DIRM GET xxxxxxxx

     where:

     > xxxxxxxx is the userid of an existing entry in the directory.
     >
     > A copy of this user's directory will be sent to MAINT's reader. You will need to read in the file before you can make any changes to it.
   - File this directory entry as DUMMY DIRECT
   - Now

```
Xedit DUMMY DIRECT
```

and use the format of this entry to create a new entry for the specified user you want added to the directory.

- File this changed entry as xxxxxxxx DIRECT where xxxxxxxx is the userid you just created to add to the directory.
- Issue the following command:

```
DIRM ADD xxxxxxxx
```

where:

xxxxxxxx is the userid of the entry you just created and want added to the directory.

If DIRMAINT is not installed do the following:

1. For an already existing directory entry that you want to change:

   - Xedit the file xxxxxxxx DIRECT, where xxxxxxxx is the name of the CP directory source. (This file is generally called USER DIRECT).
   - Locate the userid in the file.
   - Make the necessary changes
   - File it
   - Issue the command

   ```
   DIRECT USERS
   ```

2. To create a new entry and add it to the directory.:

   - Xedit the xx directory source file.
   - Add the new directory entry into this file with a format like the other entries in the file.
   - File it.
   - Issue the command:

   ```
   DIRECT USERS
   ```

Log off the MAINT userid.

Now for the changes to be recognized by a user (that user is logged on and DIRMAINT is not installed), you need to tell the user to log off and log back on. MAINT must also log off and log back on if changes were made to MAINT's entry.

The following disk sizes are specified in FB-512 blocks. These sizes take into account only the VM/IPF release 5 requirements. If you plan to use the specified disks for other purposes, the sizes must be increased accordingly.

The following is a table you can use to help you determine how many blocks or cylinders are needed for DASD types other than FB-512.

DASD TYPE	FB-512 BLOCKS/CYLINDER
3310	1
3330	418
3340	168
3350	900
3370	1
3375	600
3380	930

Figure 3. FB-512 Blocks/Cylinder per DASD Type

For the following directory entries, the lowercase words represent variable information that you must supply. For example "pass" is the variable used to represent the user's password. The passwords for any userids that run as disconnected virtual machines and are autologged (i.e. AUTOLOG1, CMSBATCH, DATAMOVR, DIRMAINT, DISKACNT, ISPVM, OPERATNS, RSCS, and VMUTIL) must match the passwords for the directory entries in AUTOLOG1's profile exec.

For an explanation of these variables, see the *VM/SP Planning and System Generation Guide* (if using VM/SP release 2), or the *VM/SP Planning Guide and Reference* (if using VM/SP release 3).

Any information in a shaded area is a new entry or a new minidisk added to the existing userids. These entries are unique to VM/IPF release 5.

```
USER $ALLOC$ NOLOG
 MDISK 123 FB-512 000000 000016 VMSRES R
 MDISK 124 FB-512 000000 000016 VMSEXT R
 MDISK 125 FB-512 000000 000016 VMKP01 R
 MDISK 126 FB-512 000000 000016 VMSTGE R
```

> **Note:** CP keeps certain allocation information in this area. It must be allocated to dummy disks in the directory to prevent DIRMAINT from allocating it to active disks. An entry is required for each real DASD volume in the system. For CKD DASD devices, the entry begins at cylinder 0 for 1 cylinder. For FB-512 DASD devices, the entry begins at block 0 for 16 blocks.

> VM/IPF release 5 requires that the virtual addresses of these disks match the addresses that are defined in the DMKRIO.

```
USER ADMIN pass 1664K 16M ABCDEFG
ACCOUNT number distr
IPL     CMS PARM AUTOCR
CONSOLE 009 3215
SPOOL    00C 2540 READER *
SPOOL    00D 2540 PUNCH A
SPOOL    00E 1403 A
LINK MAINT    190 190 RR
LINK MAINT    19D 19D RR
LINK MAINT    19E 19E RR
LINK MAINT    300 300 RR
MDISK 191 FB-512 blkr 000400 volser MR pr pw
```

```
USER AUTOLOG1 pass 512K mstor BDG
 ACCOUNT number distr
 IPL     CMS
 CONSOLE 009 3215
 SPOOL   00C 2540 READER *
 SPOOL   00D 2540 PUNCH  A
 SPOOL   00E 1403 A
 LINK MAINT      190 190 RR
 MDISK 191 FB-512 blkr 000200 volser MR pr WAUTOLOG
```

Note: If you plan to use the VM/IPF release 5 Tailoring dialog, the write password for the 191 disk must be WAUTOLOG. If you change this password, you must also update the RSTADMIN PWLIST file which exists on the ADMIN 191 disk.

```
USER CPRM pass 512K mstor G
 ACCOUNT number distr
 IPL     CMS
 CONSOLE 009 3215
 SPOOL   00C 2540 READER *
 SPOOL   00D 2540 PUNCH  A
 SPOOL   00E 1403 A
 LINK MAINT      190 190 RR
 LINK MAINT      190 19D RR
 LINK MAINT      19E 19E RR
 LINK OPERATNS 193 193 RR
 MDISK 191 FB-512 blkr 000200 volser MR pr  pw
 MDISK 192 FB-512 blkr blks   volser MR ALL pw
 MDISK 291 FB-512 blkr 000680 volser MR pr  pw
```

Note: See "Calculating the Size of CPRM's 192 Disk" on page 24 for a description of how to calculate the size of the 192 disk.

```
USER DATAMOVR pass 512K mstor G
 ACCOUNT number distr
 OPTION ACCT ECMODE
 IPL CMS
 CONSOLE 009 3215
 SPOOL   00C 2540 READER *
 SPOOL   00D 2540 PUNCH  A
 SPOOL   00E 1403 A
 LINK MAINT 190 190 RR
 LINK DIRMAINT 191 193 RR
 MDISK 191 FB-512 blkr 002090 volser MR pr pw
```

```
USER DIRMAINT pass 1M mstor BG
 ACCOUNT number distr
 OPTION  REALTIMER ECMODE
 IPL     CMS
 CONSOLE 009 3215
 SPOOL   00C 2540 READER *
 SPOOL   00D 2540 PUNCH  A
 SPOOL   00E 1403 A
 LINK MAINT      190 190 RR
 LINK MAINT      19E 19E RR
 MDISK 191 FB-512 002296 004560 VMPK01 MR RDIRM WDIRM MDIRM
 MDISK 193 FB-512 047376 007752 VMPK01 MR RDIRM WDIRM MDIRM
 MDISK 195 FB-512 100248 007802 VMSEXT MR RDIRM WDIRM MDIRM
 MDISK 123 FB-512 000000 126016 VMSRES MW
```

Note: If the password for the 195 disk is not RDIRM, then the password must be changed in the DIRECT PARMS file which is located on SYSDUMP1's 191 disk.

```
USER DISKACNT pass 512K mstor BG
 ACCOUNT number distr
 OPTION  ECMODE
 IPL     CMS
 CONSOLE 009 3215
 SPOOL   00C 2540 READER *
 SPOOL   00D 2540 PUNCH  A
 SPOOL   00E 1403 A
 LINK MAINT      190 190 RR
 LINK MAINT      19D 19D RR
 LINK MAINT      19E 19E RR
 LINK MAINT      300 300 RR
 MDISK 191 FB-512 blkr 000336 volser MR pr pw


USER IIPS pass 2M mstor G
 ACCOUNT number distr
 IPL     CMS
 CONSOLE 009 3215
 SPOOL   00C 2540 READER *
 SPOOL   00D 2540 PUNCH  A
 SPOOL   00E 1403 A
 LINK MAINT      190 190 RR
 LINK MAINT      19D 19D RR
 LINK MAINT      19E 19E RR
 MDISK 191 FB-512 blkr 000200 volser MR
 MDISK 192 FB-512 blkr blks   volser MR pr  pw
 MDISK 193 FB-512 blkr 003666 volser MR ALL pw pm
```

> **Note:** There are no VM/IPF release 5 files on the 192 disk. However, if
> you plan to install the IIPS program product on your system, VM/IPF
> release 5 requires that it be installed on the 192 disk. See the *IIPS/IIAS
> Operations Guide* for the appropriate size.

```
USER ISPVM pass 512K mstor BEG
 ACCOUNT number distr
 IPL     CMS
 CONSOLE 009 3215
 SPOOL   00C 2540 READER *
 SPOOL   00D 2540 PUNCH  A
 SPOOL   00E 1403 A
 LINK MAINT 190 190 RR
 LINK MAINT 19E 19E RR
 MDISK 191 FB-512 006856 001330 VMPK01
 MDISK 192 FB-512 008186 014630 VMPK01 MR RISPF WISPF MISPF
```

```
USER MAINT pass 6M 16M ABCDEFG
 ACCOUNT number distr
 IPL     190
 CONSOLE 009 3215
 SPOOL   00C 2540 READER *
 SPOOL   00D 2540 PUNCH  A
 SPOOL   00E 1403 A
 LINK CPRM       191 498 W
 LINK CPRM       291 499 W
 LINK DIRMAINT   191 197 W
 LINK IIPS       192 492 W
 LINK IIPS       193 493 W
 LINK ISPVM      192 497 W
 LINK OPERATNS   193 491 W
 LINK RSCS       191 202 MW
 MDISK 123 FB-512 000000 126016 VMSRES MW
 MDISK 124 FB-512 000000 126016 VMSEXT MR
 MDISK 125 FB-512 000000 126016 VMPK01 MR
 MDISK 126 FB-512 000000 126016 VMSTGE MR
 MDISK 190 FB-512 blkr   blks   volser MR ALL
 MDISK 191 FB-512 blkr   000400 volser MR pr  pw
 MDISK 194 FB-512 blkr   blks   volser MR pr
 MDISK 19D FB-512 blkr   blks   volser MR ALL
 MDISK 19E FB-512 blkr   005000 volser MR ALL pw pm
 MDISK 293 FB-512 blkr   blks   volser MR pr
 MDISK 294 FB-512 blkr   blks   volser MR pr
 MDISK 300 FB-512 blkr   003800 volser MR pr  pw pm
 MDISK 310 FB-512 blkr   014600 volser MR ALL pw pm
 MDISK 319 FB-512 blkr   blks   volser MR ALL pw pm
 MDISK 31A FB-512 blkr   blks   volser MR ALL pw pm
 MDISK 325 FB-512 blkr   blks   volser MR ALL pw pm
 MDISK 393 FB-512 blkr   blks   volser MR pr
 MDISK 394 FB-512 blkr   blks   volser MR pr
 MDISK 3A0 FB-512 blkr   000420 volser MR ALL pw pm
```

Note: The 123 disk is used to update the CP nucleus. The virtual address must match the address specified by the SYSRES parameter of the SYSRES macro as defined in the DMKSYS.

There are no VM/IPF release 5 files on the 190, 194, 19D, 293, 294, 393, and 394 files. For the appropriate sizes, refer to the:

> *VM/SP Planning and System Generation Guide* (if using VM/SP release 2)
> *VM/SP Installation Guide* (if using VM/SP release 3).

There are no VM/IPF release 5 files on the 319, 31A, and 325 disks. The sizes of these disks are dependent on the sizes of the programs that you choose to install there.

```
USER OPERATNS pass 512K mstor BCEG
 ACCOUNT number distr
 IPL     CMS
 CONSOLE 009 3215
 SPOOL   00C 2540 READER D
 SPOOL   00D 2540 PUNCH  A
 SPOOL   00E 1403 A
 LINK MAINT     190 190 RR
 LINK MAINT     19D 19D RR
 LINK MAINT     19E 19E RR
 LINK MAINT     300 300 RR
 MDISK 191 FB-512 blkr 000200 volser MR pr pw
 MDISK 193 FB-512 blkr blks   volser MR pr pw
```

Note: There are no VM/IPF release 5 files on the 193 disk. For the appropriate sizes, refer to the:

> *VM/SP Planning and System Generation Guide* (if using VM/SP release 2)
> *VM/SP Installation Guide* (if using VM/SP release 3)

```
USER OPERATOR pass 1M mstor ABCDEFG
 ACCOUNT number distr
 IPL     CMS PARM AUTOCR
 CONSOLE 009 3215
 SPOOL   00C 2540 READER *
 SPOOL   00D 2540 PUNCH  A
 SPOOL   00E 1403 A
 LINK MAINT     190 190 RR
 LINK MAINT     19D 19D RR
 LINK MAINT     19E 19E RR
 LINK MAINT     300 300 RR
 MDISK 191 FB-512 blkr 000400 volser MR pr pw
```

```
USER OP1 pass 1M mstor ABCDEFG
 ACCOUNT number distr
 IPL     CMS PARM AUTOCR
 CONSOLE 009 3215
 SPOOL   00C 2540 READER *
 SPOOL   00D 2540 PUNCH  A
 SPOOL   00E 1403 A
 LINK MAINT     190 190 RR
 LINK MAINT     19D 19D RR
 LINK MAINT     19E 19E RR
 LINK MAINT     300 300 RR
 MDISK 191 FB-512 blkr 000400 volser MR pr pw
```

```
USER RSCS pass 512K mstor BG
 ACCOUNT number distr
 OPTION ACCT
 IPL     191
 CONSOLE 009 3215
 SPOOL   00C 2540 READER *
 SPOOL   00D 2540 PUNCH  A
 SPOOL   00E 1403 A
 LINK MAINT     190 190 RR
 MDISK 191 FB-512 061528 002280 VMPK01 MR RRSCS WRSCS MRSCS
```

```
USER SYSDUMP1 pass 1M mstor BG
 ACCOUNT number distr
 IPL     CMS
 CONSOLE 009 3215
 SPOOL   00C 2540 READER *
 SPOOL   00D 2540 PUNCH  A
 SPOOL   00E 1403 A
 LINK MAINT     190 190 RR
 LINK MAINT     19D 19D RR
 LINK MAINT     19E 19E RR
 LINK MAINT     300 300 RR
 MDISK 123 FB-512 000000 126016 VMSRES RR
 MDISK 124 FB-512 000000 126016 VMSEXT RR
 MDISK 125 FB-512 000000 126016 VMPK01 RR
 MDISK 126 FB-512 000000 126016 VMSTGE RR
 MDISK 191 FB-512 blkr   000400 volser MR pr WDUMP
```

Note:

VM/IPF release 5 requires that the virtual addresses of the first four disks match the addresses that are defined in the DMKRIO. These disks are used to perform a DDR (DASD Dump/Restore) disk to tape backup of the system and to restore user files from backup tapes.

The write password for the 191 disk must be WDUMP. If you change this password, you must also update the RSTADMIN PWLIST file which exists on the ADMIN 191 disk.

```
USER VMUTIL pass 512K mstor ABDEG
ACCOUNT number distr
OPTION ECMODE
IPL    CMS
CONSOLE 009 3215
SPOOL   00C 2540 READER *
SPOOL   00D 2540 PUNCH  A
SPOOL   00E 1403 A
LINK MAINT     190 190 RR
LINK MAINT     19D 19D RR
LINK MAINT     19E 19E RR
LINK MAINT     300 300 RR
MDISK 191 FB-512 blkr 000400 volser MR pr pw
```

Calculating the Size of CPRM's 192 Disk

The CPRM 192 disk contains problem reports that are created through use of the VM/IPF release 5 Problem Control Facility dialog. The size of the CPRM 192 disk can be estimated by using the following description.

To estimate the disk space for the CPRM 192 disk, the following variables are assumed:

N = the total number of users creating problem reports.
R = the average number of problem reports created by each user.

The items that affect the size of the disk are:

1. The size of the next problem report number for each user is 80 bytes, so this item requires a total of:

   $(N * 80)$ bytes

2. The size of an average problem report is 6600 bytes, so this item requires a total of:

   $(N * R * 6600)$ bytes

3. An additional 20,000 bytes is required for miscellaneous files:

   20,000   bytes

Adding together each of the above items, the formula used for determining the size of the CPRM 192 disk is:

Size in bytes = $(N * 80) + (N * R * 6600) + 20000$

N = 22 (The total number of users creating problem reports.)
R = 21 (The average number of problem reports created by each user.)

So, using the formula we have:

Size in bytes   = (22 * 80)   + (22 * 21 * 6600)   + 20000
                = 1760   + 3,049,200   + 20000
                = 3,070,960

Therefore, the directory entry for FB-512 blocks would be the size in bytes divided by 512: 3,070,960 / 512 = 5998 FB-512 blocks.

If the CPRM 192 disk becomes full, the VM/IPF release 5 Problem Control Facility (PCF) dialog will inform the system administrator. PCF checks a DASD utilization threshold and warns the system administrator when the threshold is reached.

Disks Which Must be Formatted

In the following two sections you will need to check to see if certain disks are formatted before installing VM/IPF release 5 or before invoking VM/IPF release 5. To find out whether or not the specified disk is formatted, logon to the appropriate userid and issue the following command:

    ACCess cuu

where:

   cuu is the disk address.

If the disk has **NOT** been formatted, you will receive the following message:

    DMSACC112S 'C(cuu)' DEVICE ERROR

To format the disk, issue:

    FORMAT 'cuu' x

where:

   cuu is the disk address
   x is the access mode

Before the disk is formatted you will receive the following message:

    DMSPOR603R FORMAT WILL ERASE ALL FILES ON
    DISK 'mode(cuu)'. DO YOU WISH TO CONTINUE?
    (YES/NO):

Answer YES.

You will be asked to enter a disk label for the disk you are formatting. You should enter a label that you feel will be easy for you to remember later on should you need to identify that disk later.

Note: If you allocate any new minidisks, or reallocate any minidisks, you will have to format them.

- If the following disks have not already been formatted before installing VM/IPF release 5, then you must format them.

   AUTOLOG1 191
   MAINT   19E
   MAINT   319
   MAINT   31A
   MAINT   325
   MAINT   3A0
   OPERATNS 191
   OPERATNS 193
   OPERATOR 191

- If you want to load the VM/IPF release 5 "teachware," the following disk must be formatted (if they have not already been formatted) before installing VM/IPF release 5.

   IIPS   193

- The following disks must be formatted before installing VM/IPF release 5. However, if they are not formatted, the VM/IPF release 5 installation process will format them for you.

   ADMIN   191
   CPRM   191
   CPRM   192
   CPRM   291
   DISKACNT 191
   MAINT   300
   MAINT   310
   OP1   191
   SYSDUMP1 191
   VMUTIL   191

Chapter 3. Installation

Once you have met all the requirements discussed in "Chapter 2. Planning," then you can install VM/IPF release 5.

"Installation" of VM/IPF release 5 consists of two stages:

1. Loading VM/IPF release 5 from tape to disks

2. Setting up the connections between VM/IPF release 5 and other elements of the system

   Once IPF release 5 is installed you can connect users to the system to allow them access to VM/IPF release 5.

Stage 1 must be performed after VM/SP is installed, but may be performed either before or after the installation of the ISPF program product and any of the corequisite or optional program products listed in "Software Requirements" on page 5. This stage is described in "Stage 1 - Loading VM/IPF Release 5."

Stage 2 must be performed after the completion of Stage 1, and after the installation, refresh, or service of the ISPF program product and any of the corequisite or optional program products listed in "Software Requirements" on page 5. This stage is described in "Stage 2 - Connecting VM/IPF Release 5 to the System" on page 36.

Connecting users to the system can only be done after Stage 2 has been completed at least once. In addition, the process for connecting users to VM/IPF release 5 **must** be done each time that additional users desiring access to VM/IPF release 5 are added to the system. This process is described in "Connecting Users to VM/IPF Release 5" on page 52.

Stage 1 - Loading VM/IPF Release 5

Introduction

If your system meets the requirements as described in "Chapter 2. Planning," you are now ready to proceed with Stage 1. This section describes the steps necessary to get VM/IPF release 5 on the system. Stage 1 is broken down into two steps:

1. Invoking the VM/IPF release 5 Installation Execs

2. Interactions with the VM/IPF release 5 Installation Execs

During the execution of the VM/IPF release 5 install execs, you may be prompted for write passwords to the following disks. You should get these passwords now from your directory, so you won't have to stop and look for them when you are prompted for them.

```
OPERATOR   191
OPERATNS   191
AUTOLOG1   191
CPRM       191
ADMIN      192
SYSDUMP1   191
OP1        191
VMUTIL     191
DISKACNT   191
```

The tape format used for the VM/IPF release 5 product tape is VMFPLC2. The following is the tape layout:

File #	File Contents	Description
1	Copyright Notice	
	I5748MS1 050010	Product information
	I5748MS1 EXEC	The main install exec
	FMT$SET5 EXEC	Copies VM/IPF release 5 files.
	FMTD419E EXEC	List of VM/IPF release 4 files on the MAINT 19E disk.
	FMTD4300 EXEC	List of VM/IPF release 4 files on the MAINT 300 disk.
	FMTD519E EXEC	List of VM/IPF release 5 files on the MAINT 19E disk.
	FMTD5300 EXEC	List of VM/IPF release 5 files on the MAINT 300 disk.
	FMTD5499 EXEC	List of VM/IPF release 5 files on the MAINT 499 disk.
	FMTD5310 EXEC	List of VM/IPF release 5 files on on the MAINT 310 disk.
2	I5748MS1 Memo	Memo to users
3	VM/IPF5 Utilities	Loaded to MAINT 19E
4	General User Code	Loaded to MAINT 19E
5	System Support Code, Administrator Code, Operator Code	Loaded to MAINT 300
6	PCF Code	Loaded to CPRM 291 (MAINT 499)
7	Panels, Messages, CLRSCRN MODULE, IPFIPF DEFAULT2, RGGLLIB LOADLIB	Loaded to MAINT 310
8	IPF DTRREF	Loaded to MAINT 3A0. This is the VM/IPF Module and EXEC Guide.
9	VM/IPF5 Teachware	Loaded to IIPS 193 (MAINT 493)
10	VM/IPF5 Source Code	Not loaded to disk

1. Log on to the MAINT userid using the NOIPL option. Issue the following commands:

   ```
   TERM MODE VM
   lpl CMS
   ```

2. Force the following users off of the system.

   ADMIN
   AUTOLOG1
   CPRM
   DISKACNT
   OP1
   OPERATOR
   SYSDUMP1
   VMUTIL

   First, warn the users that they will be logged off. Log them off by issuing the command:

   ```
   FORCE xxxxxxxx
   ```

   where:

   xxxxxxxx is the userid you want to force off the system.

   You must perform the FORCE command for each user, thus allowing MAINT to link to each user's 191 disk.

3. Mount and ready the VM/IPF release 5 product tape.

4. Attach the tape drive to MAINT as 181 by issuing the following command:

   ```
   ATTach cuu * 181
   ```

   where:

   cuu is the tape drive address where the VM/IPF release 5 tape is mounted.

5. Define a temporary disk. The following chart indicates the number of blocks/cylinders that should be defined for each DASD type.

DASD TYPE	SIZE
FB-512^2	4000 blocks
3330	15 cylinders
3340	30 cylinders
3350	10 cylinders
3375	10 cylinders
3380	20 cylinders

   Now define and access the temporary disk by issuing the command:

---

[2] FB-512 is the DASD type you need to specify when defining a temporary disk for 3310 or 3370 DASD.

```
CP DETach 001

CP DEFine Txxxxxx 001 yyyy,
```

where:

xxxxxx is the DASD TYPE.
yyyy is the corresponding SIZE specified in the above list.

```
FORMAT 001 C
```

Reply **YES** to message 'DMSFOR603R'
Reply **TMP001** to message 'DMSFOR605R'

6. Access MAINT's working disks by issuing the command:

```
ACCess 194 A

ACCess 191 D
```

7. Position the tape at the beginning by issuing the command:

```
TAPE REWind
```

8. Load the first 2 logical tape files to the temporary disk by issuing the command:

```
VMFPLC2 LOAD * * C (EOF 2 NOPRINT
```

9. Print and read the Memo to Users by issuing the command:

```
PRINT 15748MS1 MEMO C (CC
```

Note: The Memo to Users contains both upper and lowercase letters. If your printer does not handle lowercase letters, use the following command instead:

```
PRINT 15748MS1 MEMO C (CC UPCASE
```

10. Invoke the VM/IPF release 5 main install exec by issuing the command:

```
15748MS1
```

The "Sample Run" on page 34 will be displayed next.

Interactions with the VM/IPF Release 5 Installation Execs

This section describes what the installation execs are doing for you following step 10 in the section "Invoking the VM/IPF Release 5 Installation Execs" on page 29.

- STEP 1 - Verifies that the required disks exist. The disks that will be loaded to are linked and accessed.

  The exec expects that the following disks have been formatted prior to executing this exec. You will be prompted for the write password when linking to other users' disks. If any of the disks have not been formatted, then the tape is positioned at the end of the product, a message is displayed and execution is terminated.

  The following disks are linked and accessed.

Links				Access Mode	
MAINT	19E	19E	W	Y	
MAINT	3A0	3A0	W	G	
MAINT	319	319	W	T	
MAINT	31A	31A	W	T	
MAINT	325	325	W	T	
OPERATOR	191	551	W	F	
OPERATNS	191	552	W	H	
MAINT	491	491	W	I	(OPERATNS 193)
AUTOLOG1	191	554	W	J	
MAINT	493	493	W	Z	(IIPS 193)

  The exec expects that you have defined the following disks in the directory as documented in "Chapter 2. Planning." If you did not format one of the following disks, you will be asked if you want the exec to format it for you.

Links				Access Mode	
MAINT	300	300	W	U	
MAINT	310	310	W	X	
MAINT	498	498	W	L	(CPRM 191)
ADMIN	191	49A	W	M	
CPRM	192	335	W	T	
SYSDUMP1	191	556	W	N	
OP1	191	557	W	O	
VMUTIL	191	558	W	P	
DISKACNT	191	559	W	Q	
MAINT	499	499	W	T	(CPRM 291)

- STEP 2 - Defines which environment the user is installing in.

  The following prompt is displayed on the screen.

```
THE PRODUCT YOU ARE INSTALLING IS VM/IPF5.
IF YOU HAVE NOT READ THE VM/IPF5 SYSTEM REFERENCE CHAPTERS
ON INSTALLING VM/IPF5, YOU SHOULD CHOOSE OPTION 4 BELOW
AND READ THE CHAPTERS.
WHICH OF THE FOLLOWING DO YOU WANT TO DO.


     1.   INSTALL VM/IPF5 FOR THE FIRST TIME.
          THIS WILL LOAD THE VM/IPF5 FILES FROM TAPE
          AND COPY THEM TO THE RIGHT DISKS.
     2.   REPLACE VM/IPF4 WITH VM/IPF5.
          THIS WILL ERASE ALL VM/IPF4 FILES FROM THE
          MAINT 19E AND MAINT 300 DISKS, BEFORE LOADING
          THE VM/IPF5 FILES FROM TAPE.
     3.   RESTART OR REINSTALL VM/IPF5.
          THIS WILL ERASE ALL VM/IPF5 CODE FROM THE
          MAINT 19E, MAINT 300, MAINT 499(CPRM 291), AND MAINT 310
          DISKS, BEFORE LOADING THE VM/IPF5 FILES FROM TAPE.
     4.   NONE OF THE ABOVE.
          THIS WILL TERMINATE THE INSTALLATION.
```

You should now enter one of the above numbers.

• STEP 3 - Loads the following files to the appropriate disks.

If an error occurs loading any of the files, the tape is positioned at the end of the product, a message is displayed, and execution is terminated.

1. Loads VM/IPF release 5 Utilities to MAINT 19E.

2. Loads VM/IPF release 5 General User code to MAINT 19E.

3. Loads VM/IPF release 5 System Support, Administrator, and Operator code to MAINT 300.

4. Loads VM/IPF release 5 Problem Control Facility (PCF) code to MAINT 499 (CPRM 291).

5. Loads VM/IPF release 5 MACLIBs, LOADLIB, CLRSCRN MODULE, and default file to MAINT 310.

If an error occurs loading the remaining files from tape to disk, it is not considered a serious error, so execution continues.

1. Loads VM/IPF Module and EXEC Guide to MAINT 3A0.

2. Loads VM/IPF release 5 Teachware to MAINT 493 (IIPS 193). These files contain documentation on how to use the System Product Editor (XEDIT) and EXEC2.

• STEP 4 - Copies I5748MS1 MEMO to MAINT 300.

• STEP 5 - Renames the following files if they already exist.

Disk		Old Fileid	New Fileid
ADMIN	191	PROFILE EXEC	PROFILE FMTEXEC
		RSTADMIN PWLIST	RSTADMIN FMTPWLIS
AUTOLOG1	191	PROFILE EXEC	PROFILE FMTEXEC
		RSTxPDFLT EXEC	RSTPDFLT FMTEXEC
CPRM	191	PROFILE EXEC	PROFILE FTMEXEC
DISKACNT	191	PROFILE EXEC	PROFILE FTMEXEC
		DTR$ACNT EXEC	DTR$ACNT FMTEXEC
		USR$ACNT EXEC	USR$ACNT FMTEXEC
		DISKACNT PARMS	DISKACNT FMTPARMS
MAINT	191	PROFILE EXEC	PROFILE FMTEXEC
OP1	191	PROFILE EXEC	PROFILE FMTEXEC
OPERATNS	191	PROFILE EXEC	PROFILE FMTEXEC
OPERATOR	191	PROFILE EXEC	PROFILE FMTEXEC
SYSDUMP1	191	PROFILE EXEC	PROFILE FMTEXEC
		OPS$AUTO EXEC	OPS$AUTO FMTEXEC
		DIRECT PARMS	DIRECT FMTPARMS
		DASD PARMS	DASD FMTPARMS
		TAPE PARMS	TAPE FMTPARMS
VMUTIL	191	PROFILE EXEC	PROFILE FMTEXEC
		WAKEUP PARMS	WAKEUP FMTPARMS

If message FMT020E is issued, then the rename has failed and the original file is not replaced.

- STEP 6 - The VM/IPF release 5 files are copied from the MAINT 300 disk as shown. The Old Fileid in the list below is the name of the file as it exists on the MAINT 300 disk. The New Fileid is the name it is copied to the Disk with.

Disk		Old Fileid	New Fileid
ADMIN	191	ADMIN PROFILE	PROFILE EXEC
		RSTADMIN PWLIST	RSTADMIN PWLIST
AUTOLOG1	191	AUTOLOG1 PROFILE	PROFILE EXEC
		RSTPDFLT EXEC	RSTPDFLT EXEC
CPRM	191	CPRM PROFILE	PROFILE EXEC
DISKACNT	191	DISKACNT PROFILE	PROFILE FMTEXEC
		DTR$ACNT EXEC	DTR$ACNT EXEC
		USR$ACNT EXEC	USR$ACNT EXEC
		DISKACNT PARMS	DISKACNT PARMS
MAINT	191	MAINT PROFILE	PROFILE EXEC
OP1	191	OPERATOR PROFILE	PROFILE EXEC
OPERATNS	191	OPERATNS PROFILE	PROFILE EXEC
OPERATOR	191	OPERATOR PROFILE	PROFILE EXEC
SYSDUMP1	191	SYSDUMP1 PROFILE	PROFILE EXEC
		OPS$AUTO EXEC	OPS$AUTO EXEC
		DIRECT PARMS	DIRECT PARMS
		DASD PARMS	DASD PARMS
		TAPE PARMS	TAPE PARMS
VMUTIL	191	VMUTIL PROFILE	PROFILE EXEC
		WAKEUP PARMS	WAKEUP PARMS

If message FMT018E is issued, then the copy has failed and the original file is not replaced.

- STEP 7 - Positions the tape. If processing has been successful to this point (RC = 00888), the tape will be positioned past the VM/IPF release 5 source code. If processing was not successful to this point, the tape will be positioned past any files that were not successfully loaded to disk, as well as the source code.

You are now finished with "Stage 1 - Loading VM/IPF Release 5."

Sample Run

This section contains a console listing of an execution of the execs. This is similar to what you will see when you execute the execs. When a response is required, it is noted by <========. You will not see this, it is only there to show you when input is expected.

```
DO YOU WISH TO INSTALL IPF RELEASE 5? (YES/NO)
yes                                      <======== you entered

FMT0011 *** INFORMATION *** LINKING TO MAINT 19E DISK
DASD 19E DETACHED
'19E' REPLACES ' Y (19E) '
FMT0011 *** INFORMATION *** LINKING TO MAINT 3A0 DISK
DASD 3A0 DETACHED
FMT0011 *** INFORMATION *** LINKING TO MAINT 319 DISK
DASD 319 DETACHED
FMT0011 *** INFORMATION *** LINKING TO MAINT 31A DISK
DASD 31A DETACHED
'31A' REPLACES ' T (319) '
FMT0011 *** INFORMATION *** LINKING TO MAINT 325 DISK
DASD 325 DETACHED
'325' REPLACES ' T (31A) '
FMT0011*** INFORMATION *** LINKING TO OPERATOR 191 DISK
DEV 551 DOES NOT EXIST
ENTER WRITE PASSWORD:
                                 <======== you enter the password
FMT0011 *** INFORMATION *** LINKING TO OPERATNS 191 DISK
DEV 552 DOES NOT EXIST
ENTER WRITE PASSWORD:
                                 <======== you enter the password
FMT0011 *** INFORMATION *** LINKING TO MAINT 491 DISK(OPERATNS 193)
DASD 491 DETACHED
FMT0011 *** INFORMATION *** LINKING TO AUTOLOG1 191 DISK
DEV 554 DOES NOT EXIST
ENTER WRITE PASSWORD:
                                 <======== you enter the password
FMT0011 *** INFORMATION *** LINKING TO MAINT 300 DISK
DASD 300 DETACHED
FMT0011 *** INFORMATION *** LINKING TO MAINT 310 DISK
DASD 310 DETACHED
FMT0011 *** INFORMATION *** LINKING TO MAINT 498 DISK(CPRM 191)
DASD 498 DETACHED
FMT0011 *** INFORMATION *** LINKING TO ADMIN 191 DISK
DEV 49A DOES NOT EXIST
ENTER WRITE PASSWORD:
                                 <======== you enter the password
FMT0011 *** INFORMATION *** LINKING TO CPRM 192 DISK
DEV 335 DOES NOT EXIST
ENTER WRITE PASSWORD:
                                 <======== you enter the password
'335' REPLACES ' T (325) '
```

```
FMT001I *** INFORMATION *** LINKING TO SYSDUMP1 191 DISK
DEV 556 DOES NOT EXIST
ENTER WRITE PASSWORD:
                                    <======== you enter the password
FMT001I *** INFORMATION *** LINKING TO OP1 191 DISK
DEV 557 DOES NOT EXIST
ENTER WRITE PASSWORD:
                                    <======== you enter the password
FMT001I *** INFORMATION *** LINKING TO VMUTIL 191 DISK
DEV 558 DOES NOT EXIST
ENTER WRITE PASSWORD:
                                    <======== you enter the password
FMT001I *** INFORMATION *** LINKING TO DISKACNT 191 DISK
DEV 559 DOES NOT EXIST
ENTER WRITE PASSWORD:
                                    <======== you enter the password
FMT001I *** INFORMATION *** LINKING TO MAINT 499 DISK(CPRM 291)
DASD 499 DETACHED
'499' REPLACES ' T (335) '
    THE PRODUCT YOU ARE INSTALLING IS VM/IPF5.
    IF YOU HAVE NOT READ THE VM/IPF5 SYSTEM REFERENCE CHAPTERS
    ON INSTALLING VM/IPF5 YOU SHOULD CHOOSE OPTION 4 BELOW AND READ
    THE CHAPTERS. WHICH OF THE FOLLOWING DO YOU WANT
    TO DO?
        1.  INSTALL VM/IPF5 FOR THE FIRST TIME.
            THIS WILL LOAD THE VM/IPF5 FILES FROM TAPE
            AND COPY THEM TO THE RIGHT DISKS.
        2.  REPLACE VM/IPF4 WITH VM/IPF5.
            THIS WILL ERASE ALL IPF4 CODE FROM THE
            MAINT 19E AND MAINT 300 DISKS BEFORE
            LOADING THE VM/IPF5 FILES.
        3.  RESTART OR REINSTALL VM/IPF5.
            THIS WILL ERASE ALL IPF5 CODE FROM THE
            MAINT 19E, MAINT 300, AND MAINT 499 (CPRM 291)
            DISKS BEFORE LOADING THE VM/IPF5 FILES.
        4. NONE OF THE ABOVE.
                                    <======== you enter the selection
```

In this sample run, selection 1 (Install VM/IPF5 for the first time) was entered.

```
FMT002I *** INFORMATION *** LOADING FILES TO MAINT 19E DISK
FMT002I *** INFORMATION *** LOADING FILES TO MAINT 300 DISK.
FMT002I *** INFORMATION *** LOADING FILES TO CPRM 291 DISK.
FMT002I *** INFORMATION *** LOADING FILES TO MAINT 310 DISK.
FMT002I *** INFORMATION *** LOADING FILES TO MAINT 3A0 DISK.
FMT001I *** INFORMATION *** LINKING TO DISK MAINT 493 (IIPS 193)
DASD 493 DETACHED
FMT002I *** INFORMATION *** LOADING FILES TO IIPS 193 DISK.
FMT009I *** INFORMATION *** THE TAPE IS NOW POSITIONED.
FMT017I *** INFORMATION *** COPYING FILES TO ADMIN 191 DISK.
FMT017I *** INFORMATION *** COPYING FILES TO AUTOLOG1 191 DISK.
FMT017I *** INFORMATION *** COPYING FILES TO CPRM 191 DISK
FMT017I *** INFORMATION *** COPYING FILES TO DISKACNT 191 DISK
FMT017I *** INFORMATION *** COPYING FILES TO MAINT 191 DISK
FMT017I *** INFORMATION *** COPYING FILES TO OPERATNS 191 DISK
FMT017I *** INFORMATION *** COPYING FILES TO OPERATOR 191 DISK
FMT017I *** INFORMATION *** COPYING FILES TO OP1 191 DISK
FMT017I *** INFORMATION *** COPYING FILES TO SYSDUMP1 191 DISK
FMT017I *** INFORMATION *** COPYING FILES TO VMUTIL 191 DISK
R(00888)
```

Note: A return code of 00777 indicates a successful run.

If you answer NO to the question: Do you wish to install IPF Release 5
(YES/NO)., then the tape is positioned at the end of the product, a message is
displayed, and execution is terminated.

Stage 2 - Connecting VM/IPF Release 5 to the System

Notes on Userids

If you are migrating to VM/IPF release 5 from VM/IPF release 3 or 4, you must do the following procedure for **all** users on the system.

1. Erase PXXXXXXX MACLIB for the user's 191 disk, where XXXXXXX is the user's id. (The userid must be preceded by the P).

2. Erase DTRSAVE MACLIB from the user's 191 disk.

3. Erase COMMANDS HISTORY file from the user's 191 disk.

4. Erase any IPF execs that might be on the user's A disk and not on a system disk.

The following section includes comparing files to make sure all of the functions of one file are contained in another. When comparing files use the following command:

```
COMPARE fn1 ft1 fm1 fn2 ft2 fm2
```

where:

fn1 ft1 fm1 is the filename, filetype, and filemode of the first file
fn2 ft2 fm2 in the filename, filetype, and filemode of the file you want to compare the first file with.

For more information on the COMPARE command, refer to the *CMS Command and Macro Reference*.

This section also requires you to make sure that disks are accessed as a certain filemode. When you are told to make sure that xxx disk is accessed as a certain disk you can do so by entering the following command:

```
Query SEARCH
```

You will see something that looks like this:

```
LJJ191  191 A    R/W
SPREL3  190 S    R/O
YDSKSP  19E Y/S  R/O
```

The second column is where you look to find the particular disk you want to make sure is accessed. The third column is the access mode. Thus, in the above example,

191 disk is accessed as A
190 disk is accessed as S
19E disk is accessed as Y/S (an extension of the S disk)

ADMIN

Log on to the ADMIN userid using the NOIPL parameter. Issue the following commands:

```
Ipl CMS
ACCess (NOPROF
```

Make sure that the 300 disk is accessed as the U-disk, and the 191 disk is accessed as the A-disk.

You need to compare the contentsx of the following files:

```
PROFILE EXEC   A
ADMIN PROFILE  U
PROFILE FMTEXEC A (if it exists)
```

It is important that you compare these files to make sure that the PROFILE EXEC A file contains all of the functions contained in the ADMIN PROFILE U file and the PROFILE FMTEXEC A file. When you are satisfied that the PROFILE EXEC A file is complete, you should erase the PROFILE FMTEXEC A file.

Next, compare the contents of the following files:

```
RSTADMIN PWLIST   A
RSTADMIN PWLIST   U
RSTADMIN FMTPWLIS A (if it exists)
```

It is important that you compare these files to make sure that the RSTADMIN PWLIST A file contains all of the functions contained in the RSTADMIN PWLIST U file and the RSTADMIN FMTPWLIS A file. When you are satisfied that the RSTADMIN PWLIST A file is complete, you should erase the RSTADMIN FMTPWLIS A file.

Log off the ADMIN userid.

AUTOLOG1

Log on to the AUTOLOG1 userid using the NOIPL parameter. Issue the following commands:

```
Ipl CMS
ACCess (NOPROF
LINK MAINT 300 300 rr  pppppppp
ACCess 300 U
```

where:

pppppppp is the read password for the MAINT 300 disk.

Make sure that the 191 disk is accessed as the A-disk.

You need to compare the contents of the folloxwing files:

```
PROFILE  EXEC    A
AUTOLOG1 PROFILE U
PROFILE  FMTEXEC A (if it exists)
```

It is important that you compare these files to make sure that the PROFILE EXEC A file contains all of the functions contained in the AUTOLOG1 PROFILE U file and the PROFILE FMTEXEC A file.

Xedit PROFILE EXEC and verify that the first statement of the file is:

CP SLEEP 10 SEC

This statement allows the OPERATOR to prevent full system initialization when the system is IPLed by issuing the command: **CP FORCE AUTOLOG1.** At a minimum, the following AUTOLOG statements must be included in the PROFILE EXEC A file. The purpose of these statements is to automatically log on certain userids when the system is IPLed.

```
CP AUTOLOG CMSBATCH ppppppp
CP AUTOLOG CPRM    ppppppp
CP AUTOLOG DATAMOVR ppppppp
CP AUTOLOG DIRMAINT ppppppp
CP AUTOLOG DISKACNT ppppppp
CP AUTOLOG ISPVM   ppppppp
CP AUTOLOG OPERATNS ppppppp
CP AUTOLOG RSCS    ppppppp
CP AUTOLOG VMUTIL  ppppppp
```

where:

ppppppp is the logon password for the respective userid.

Lastly, the PROFILE EXEC A file must contain the following statements:

```
EXEC RSTPDFLT
CP LOGOFF
```

When you are satisfied that the PROFILE EXEC A file is complete, you should erase the PROFILE FMTEXEC A file.

You need to compare the contents of the following files:

```
RSTPDFLT EXEC   A
RSTPDFLT EXEC   U
RSTPDFLT FMTEXEC A (if it exists)
```

It is important that you compare these files to make sure that the RSTPDFLT EXEC A file contains all of the functions contained in the RSTPDFLT EXEC U file and the RSTPDFLT FMTEXEC A file.

The RSTPDFLT EXEC is used to start up the system printer. The first time you want to use this EXEC, you will have to enter values for the following four (4) variables in the EXEC as they will be "UNDEFINED." (If you do not define the variables, then the function supplied by the EXEC will have to be done manually using CP commands).

The variables are:

&PRTADR - the REAL address of the system printer.
&FCBNAM - the Forms Control Buffer (FCB) value of the printer.
&UCSNAM - the Universal Character Set (UCS) value of the the printer.
&SCLASS - the printer output class of the printer.

The following is a piece of the RSTPDFLT EXEC. To define the four variables
listed above you need to use the LOCATE command on the word UNDEFINED.
Each of the four variables will be set "= UNDEFINED." Replace the word
UNDEFINED with the appropriate value for each variable. Make sure that you
enter the variables in the format given (above each UNDEFINED statement).
Then move the variable to column 1 of the EXEC.

Note: Do not make any other changes to this EXEC. If you make any other
changes to this EXEC, then the EXEC will not work. Please be sure and read the
information at the beginning of this EXEC.

```
      &TRACE OFF
**
***NOTE:  1. Variable names &PRTADR, &FCBNAM, &UCSNAM, and &SCLASS must
***             NOT be changed to any other name!
***
***       2. In assignment statements for &PRTADR, &FCBNAM, &UCSNAM, and
***          &SCLASS, there MUST be EXACTLY one(1) blank between the
***          variable name and the equals sign(=)! The "&" of the variable
***          name MUST be in column 1!
***
***       3. NO lines may inserted between the FCB assignment statement
***          the UCS assignment statement! Neither may their order be
***          reversed!
***
***       FAILURE to comply with the above notes will result in the
***           inability of RSTDPR, RSTUF, and RSTSCL EXEC's to success-
***           fully modify this EXEC.
***
**
*
*
* Return code variables
  &RCNRM = 0
  &RCNPRT = 8
  &RCNFCB = 16
  &RCNUCS = 32
  &RCNSCL = 64
  &RCBPRT = 128
  &RCBBUF = 256
* RC from VARY if device doesn't exist
  &RCPNXST = 40
* RC from LOADBUF if printer not ready
  &RCPNRDY = 148
* RC from LOADBUF if FCB/UCS doesn't exist
  &RCBNXST = 43
*
* Default is return code is normal (0)
  &XRC = &RCNRM
*
* Define how error messages, if any, are to be sent and to who
  &MTYPE = WARNING
  &MWHO = OP
*
* Define which printer, via a hexadecimal address, is to be used
*  as the default system printer.
*
*-->PRTADR = PPP,  where "PPP" is the address of the printer
  &PRTADR = UNDEFINED
*
* Define UCS (Universal Character Set) buffer and FCB (Forms Control
*  Buffer) to be used with the default printer.
```

```
*
*-->FCBNAM = FFF,   where "FFF" is the FCB name
*-->UCSNAM = UUU,   where "UUU" is the UCS name
  &FCBNAM = UNDEFINED
  &UCSNAM = UNDEFINED
*
* Define spool classes to be handled by defaulte printer.
*
*-->SCLASS = SSSS,  where "SSSS" is the list of spool classes
  &SCLASS = UNDEFINED
* The following lines are subject to NLS requirements and      @VBOKFIC
*   and translation.                                          @VBOKFIC
*
```

When you are satisfied that the RSTPDFLT EXEC A file is complete, you should erase the RSTPDFLT FMTEXEC A file.

Log off the AUTOLOG1 userid.

CMSBATCH

If you plan to use the VM/IPF release 5 Text Processing dialog to print documents via CMSBATCH, you must set up the CMSBATCH userid.

Logon to the MAINT userid. Look at the directory entry for CMSBATCH (or create one if necessary).

If the IPL statement contains the PARM BATCH option, then verify that there is an MDISK statement for a 195 disk. The 195 disk should be approximately the same size as the disk space available to any general user.

If the IPL statement does not have the PARM BATCH option, then do the following:

- Verify that there is an MDISK statement for a 191 disk. The 191 disk can be fairly small, provided it is large enough to contain the PROFILE EXEC file.

- Log on to the CMSBATCH userid using the NOIPL parameter. Issue the following commands:

    ```
    Ipl CMS
    ACCess (NOPROF
    ```

Xedit the PROFILE EXEC A file (or create one if necessary). At a minimum, it should contain the following statements:

    ```
    CP DEFINE tdisk 195 xxx
    &STACK LIFO TMP195
    &STACK LIFO YES
    FORMAT 195 Z
    CP IPL CMS PARM BATCH
    ```

where:

   tdisk is the device type in use on your system.
   xxx is the average size of the disk available to most general users.

Log off the CMSBATCH userid.

CPRM

If you plan to use the Problem Control Facility of VM/IPF release 5, then you must set up the Central Problem Report Manager userid.

Log on to the CPRM userid using the NOIPL parameter. Issue the following commands:

```
Ipl CMS
ACCess (NOPROF
LINK MAINT 300 300 RR pppppppp
ACCess 300 U
```

where:

    pppppppp is the read password of the MAINT 300 disk.

Make sure that the 191 disk is accessed as the A-disk.

You need to compare the contents of the following files:

    PROFILE EXEC   A
    CPRM   PROFILE U
    PROFILE FMTEXEC A (if it exists)

It is important that you compare these files to make sure that the PROFILE EXEC A file contains all of the functions contained in the CPRM PROFILE U file and the PROFILE FMTEXEC A file. Xedit the PROFILE EXEC A file. At a minimum, the file must contain the following statement:

    &STACK LIFO EXEC RMMENTR

When you are satisfied that the PROFILE EXEC A file is complete, you should erase the PROFILE FMTEXEC A file.

Log off the CPRM userid.

DIRMAINT

Log on to the DIRMAINT userid, using the NOIPL parameter. Issue the following commands:

```
Ipl CMS
ACCess (NOPROF
ACCess 195 C
```

The DIRMAINT EXEC file and DIRMAINT DATA file must be placed on the MAINT 319 disk.

Link and access the MAINT 319 disk by issuing the following command:

```
CP LINK MAINT 319 xxx W pppppppp
```

where:

    xxx is the address of the disk you want to link the 319 disk as
    W means you will have write access to that disk
    pppppppp is MAINT's write password

Verify that the 319 disk contains the DIRMAINT EXEC. Also, verify that the 319 disk contains the DIRMAINT DATA file. VM/IPF release 5 requires that the following entries be in the DIRMAINT DATA file:

    DIRMAINTVM= DIRMAINT
    DIRM__STAFF= ADMIN   MAINT
    LINK=   YES
    3270__MENU= NO

Note: In addition to ADMIN and MAINT, any other userids from which the VM/IPF release 5 DIRMAINT dialog can be run should be included in the DIRM__STAFF list. If you make any changes to the DATA FILE, you need to IPL CMS in order for DIRMAINT to recognize the changes.

Finally:

    Log off the DIRMAINT userid
    Log on to the ADMIN userid using the NOIPL parameter
    Issue the following commands:

```
Ipl CMS
ACCess (NOPROF
CP AUTOLOG DIRMAINT pppppppp
ACCess 319 P
DIRMAINT ASSIGN ADMIN *
DIRMAINT ASSIGN MAINT *
```

where:

pppppppp is the logon password for the DIRMAINT machine.

Note: There must be a DIRMAINT ASSIGN statement for all userids from which the VM/IPF release 5 DIRMAINT dialog can be run. If the ASSIGN statements fail, you will receive a bad return code from DIRMAINT.

Log off the ADMIN userid.

DISKACNT

Log on to the DISKACNT userid using the NOIPL parameter. Issue the following commands:

```
Ipl CMS
ACCess (NOPROF
ACCess 300 U
```

Make sure that the 191 disk is accessed as the A-disk.

You need to compare the contents of the following files:

    PROFILE EXEC   A
    DISKACNT PROFILE U
    PROFILE FMTEXEC A (if it exists)

It is important that you compare these files to make sure that the PROFILE EXEC A file contains all of the functions contained in the DISKACNT PROFILE U file and the PROFILE FMTEXEC A file. When you are satisfied that the PROFILE EXEC A file is complete, you should erase the PROFILE FMTEXEC A file.

Next, you need to compare the contents of the following files:

```
DTR$ACNT EXEC    A
DTR$ACNT EXEC    U
DTR$ACNT FMTEXEC A (if it exists)
```

It is important that you compare these files to make sure that the DTR$ACNT EXEC A file contains all of the functions contained in the DTR$ACNT PROFILE U file and the DTR$ACNT FMTEXEC A file. When you are satisfied that the DTR$ACNT EXEC A file is complete, you should erase the DTR$ACNT FMTEXEC A file.

Next, you need to compare the contents of the following files:

```
USR$ACNT EXEC    A
USR$ACNT EXEC    U
USR$ACNT FMTEXEC A (if it exists)
```

It is important that you compare these files to make sure that the USR$ACNT EXEC A file contains all of the functions contained in the USR$ACNT EXEC U file and the USR$ACNT FMTEXEC A file. When you are satisfied that the USR$ACNT EXEC A file is complete, you should erase the USR$ACNT FMTEXEC A file.

Lastly, you need to compare the contents of the following files:

```
DISKACNT PARMS    A
DISKACNT PARMS    U
DISKACNT FMTPARMS A (if it exists)
```

It is important that you compare these files to make sure that the DISKACNT PARMS A file contains all of the functions contained in the DISKACNT PARMS U file and the DISKACNT FMTPARM A file. When you are satisfied that the DISKACNT PARMS A file is complete, you should erase the DISKACNT FMTPARM A file.

Log off the DISKACNT userid.

ISPVM

Log on to the ISPVM userid using the NOIPL parameter. Issue the following commands:

```
Ipl CMS
ACCess (NOPROF
```

Xedit the PROFILE EXEC file (or create one if necessary). At a minimum, it should contain the following statements:

```
&TRACE OFF
CP SET RUN ON
CP DISC
RELEASE 192
CP DETACH 192
CP LINK ISPVM 192 192 RR
ACCESS 192 B/A
CP SPOOL CONSOLE START
```

ISPVM

Log off the ISPVM userid.

MAINT

Log on to the MAINT userid. Issue the following commands:
```
ACCess 194 D
ACCess 300 U
```

Make sure that the 191 disk is accessed as the A-disk.

You need to compare the contents of the following files:

```
PROFILE  EXEC    A
MAINT    PROFILE U
PROFILE  FMTEXEC A (if it exists)
```

It is important that you compare these files to make sure that the PROFILE EXEC A file contains all of the functions contained in the MAINT PROFILE U file and the PROFILE FMTEXEC A file. When you are satisfied that the PROFILE EXEC A file is complete, you should erase the PROFILE FMTEXEC A file.

The SYSTEM NETID file **must** exist on the MAINT 190 S-disk. To verify this, issue the following command:
```
FILELIST SYSTEM NETID S
```

If the SYSTEM NETID S file does not exist, you must create it.

First you need to find out what your CPU id is. Issue the following commands:
```
Q CPUID
```

Bytes 3 through 8 are the numbers you want to use (write them down).
```
Xedit SYSTEM NETID
```

Enter data into this file as shown in the sample file below.

CPUID	**NODEID**	**NETID**
xxxxxx	SYSTEM	RSCS

where:

    xxxxxx is the CPUID (bytes 3-8) you queried up above.
    SYSTEM is the name of your system and is known as your network node.

For more details about the SYSTEM NETID, refer to:

    VM/SP Planning and System Generation Guide (if using VM/SP release 2)
    VM/SP Installation Guide (if using VM/SP release 3)

If this file does exist, use the BROWSE command to examine it. For information about how to use the BROWSE command, refer to "BROWSE" on page 175.

Verify that the file contains the following:

- An entry that matches your CPU serial number must be specified. When you issue the command

  ```
  Q CPUID
  ```

  you need to be concerned with bytes 3 through 8. For more information about the Q CPUID command, refer to the *CP Command and Reference Manual.*

- A "nodeid" must be specified, even if your CPU is not connected into a network.

  For more information about nodeid, refer to the *RSCS Program and Operations Manual.* even if your CPU is not connected into a network.

- The userid of the network control machine must be specified as RSCS, even if you do not have the RSCS program product installed.

If this file does exist, and is incorrect, you need to make the necessary changes.

```
ACCess 190 B
Xedit SYSTEM NETID B
```

Make the necessary changes and file it.

Enter the following commands:

```
Ipl 190
SAVESYS CMS
```

The DMKSYS ASSEMBLE file may exist on either the 191 A-disk, or the 194 D-disk. Verify that the SYSOPER macro specifies the SYSDUMP operand as SYSDUMP=OPERATNS.

If you plan to use the VM/IPF release 5 Problem Control Facility dialog, you must set up the RGGU$CTL $UMSG parameter file. If you change the SYSDUMP parameter in the DMKSYS ASSEMBLE file so that it no longer equals OPERATNS, make sure you make the same change in the RGGU$CTL $UMSG file. The RGGU$CTL $UMSG file should exist on the 19E Y-disk. (It is the only Installation control file for PCF.) Use the BROWSE command to verify that the RGGU$CTL $UMSG file specifies OPERATNS as an installation dependent parameter. For information about how to use the BROWSE command, refer to "BROWSE" on page 175. If the file is incorrect, XEDIT the file and specify OPERATNS as an installation dependent parameter.

If you have made changes to the RGGU$CTL $UMSG file then you must issue the following commands:

```
Ipl 190
SAVESYS CMS
```

The following is the default system RGGU$CTL $UMSG file.

```
. Installation dependent parameters.
RGGU$CTL1 CPRM ADMIN 192 2A0 G G OPERATNS 193 D A 66 95 90
.
. The following tokens are defined:
. 1.) Userid of the cprm.
. 2.) Userid of the administrator.
. 3.) Address of problem report data disk as defined to the CPRM.
. 4.) Starting disk address for link in user's virtual machine.
. 5.) Spool class the cprm uses to send messages.
. 6.) Spool class the end user dialogs use to send commands to
CPRM.
. 7.) Userid of dump processing machine OPERATNS.
. 8.) Address of the dump storage disk as defined to OPERATNS.
. 9.) Spool class for dumps sent to OPERATNS.
.10.) Spool class for printing of problem reports.
.11.) Number of lines per page for printing.
.12.) Percentage of disk full beyond which CPRM will not operate.
.13.) Percentage of disk full beyond which CPRM issues a warning.
```

Next, if the CMSNUC MAP D file does not exist on the 194 D-disk, or is older than the CMSNUC MAP on the 191 A-disk, issue the following command:

```
COPYFILE CMSNUC MAP A = = D (REPLACE OLDDATE)
```

Next, issue the following commands:

```
CP FORCE OPERATNS
CP SPool PUnch TO OPERATNS CLASS M NOCONT NOHOLD COPY 1
DISK DUMP CPNUC MAP D
DISK DUMP CMSNUC MAP D
```

Lastly, issue the following commands:

```
CP DEFine STORage 10M
Ipl CMS
CP LINK ISPVM 192 192 rr pppppppp
ACCess 192 B/A
ISPSAVE
AUTOLOG ISPVM qqqqqqqq
CP LOGoff
```

where:

    pppppppp is the read password of the ISPVM 192 disk.
    qqqqqqqq is the CP logon password for ISPVM.

Note: After the IPSAVE command is issued, you will receive a message telling you that the system was saved. After you enter the AUTOLOG ISPVM command, you will receive one or more system messages.

Log off the MAINT userid.

OPERATNS

If you plan to use the VM/IPF release 5 Problem Control Facility dialog, then you must set up the OPERATNS userid.

Log on to the OPERATNS userid using the NOIPL parameter. Issue the following commands:

```
Ipl CMS
ACCess (NOPROF
ACCess 300 U
```

Make sure that the 191 disk is accessed as the A-disk.

You need to compare the contents of the following files:

    PROFILE EXEC   A
    OPERATNS PROFILE U
    PROFILE FMTEXEC A (if it exists)

It is important that you compare these files to make sure that the PROFILE EXEC A file contains all of the functions contained in the OPERATNS PROFILE U file and the PROFILE FMTEXEC A file. At a minimum, the PROFILE EXEC A file should contain the following statement:

    &STACK LIFO EXEC RMPMENTR

When you are satisfied that the PROFILE EXEC A file is complete, you should erase the PROFILE FMTEXEC A file.

Next, use the following command to query your virtual reader files.

    CP Query RDR * ALL

The following files should be in your reader:

    CPNUC   MAP
    CMSNUC MAP

If these files are not in your reader:

- Disconnect OPERATNS
- Log on to the MAINT userid
- Issue the following commands to send the files to the OPERATNS userid.

        SP PUNch OPERATNS
        DISK DUMP CPNUC MAP
        DISK DUMP CMSNUC MAP
        SP PUNch CLOSE

- Log off the MAINT userid
- Log back onto the OPERATNS userid and issue the following commands:

        CP SPool RDR CLASS M NOCONT NOHOLD
        ACCess 193 A
        DISK LOAD (OLDDATE)
        DISK LOAD (OLDDATE)
        MAP CP
        MAP CMS
        CP LOGOFF

    The MAP commands are IPCS Extended commands. Refer to the *VM/Interactive Problem Control System Extended User's Guide and Reference* for details.

OPERATOR

Log on to the OPERATOR userid. Make sure that the 300 disk is accessed as the U-disk, and the 191 disk is accessed as the A-disk.

You need to compare the contents of the following files:

```
PROFILE  EXEC    A
OPERATOR PROFILE  U
PROFILE  FMTEXEC  A (if it exists)
```

It is important that you compare these files to make sure that the PROFILE EXEC A file contains all of the functions contained in the OPERATOR PROFILE U file and the PROFILE FMTEXEC A file. When you are satisfied that the PROFILE EXEC A file is complete, you should erase the PROFILE FMTEXEC A file.

Log off the OPERATOR userid.

OP1

Log on to the OP1 userid. Make sure that the 300 disk is accessed as the U-disk, and the 191 disk is accessed as the A-disk.

You need to compare the contents of the following files:

```
PROFILE  EXEC    A
OPERATOR PROFILE  U
PROFILE  FMTEXEC  A (if it exists)
```

It is important that you compare these files to make sure that the PROFILE EXEC A file contains all of the functions contained in the OPERATOR PROFILE U file and the PROFILE FMTEXEC A file. When you are satisfied that the PROFILE EXEC A file is complete, you should erase the PROFILE FMTEXEC A file.

Log off the OP1 userid.

SYSDUMP1

Log on to the SYSDUMP1 userid using the NOIPL parameter. Issue the following commands:

```
Ipl CMS
ACCess (NOPROF
ACCess 300 U
```

Make sure that the 191 disk is accessed as the A-disk.

You need to compare the contents of the following files:

```
PROFILE  EXEC    A
SYSDUMP1 PROFILE  U
PROFILE  FMTEXEC  A (if it exists)
```

It is important that you compare these files to make sure that the PROFILE EXEC A file contains all of the functions contained in the SYSDUMP1 PROFILE U file and the PROFILE FMTEXEC A file. When you are satisfied that the PROFILE EXEC A file is complete, you should erase the PROFILE FMTEXEC A file.

Next, you need to compare the contents of the following files:

```
DIRECT  PARMS   A
DIRECT  PARMS   U
DIRECT  FMTPARMS A (if it exists)
```

The DIRECT PARMS file contains the userid that "owns" the directory, the read share password for the disk that contains the directory, the address of this disk, and the filename of the directory. If you plan to use the VM/IPF release 5 BACKUP/RESTORE dialogs, the userid must be DIRMAINT, the address must be 195, and the filename must be USER.

Note: If you are migrating from VM/IPF release 4 to VM/IPF release 5, you must add the disk address parameter.

The DIRECT PARMS file is located on SYSDUMP1's virtual 191 minidisk and contains a line of information that the SYSDUMP1 virtual machine uses to link to the CP directory. During a restore operation, the SYSDUMP1 virtual machine reads minidisk extents for the disk volume it is restoring from the CP directory.

The entry in the DIRECT PARMS file must be in the following format:

    userid read-password directory-name minidisk-address

where

> **userid** is the userid that owns the CP directory file (usually "DIRMAINT").
>
> **read–password** is the read password for the DIRMAINT virtual machine's 195 minidisk (usually "RDIRM").
>
> **directory–name** is the filename of the CP directory (usually "USER").
>
> **minidisk–address** is the address of the minidisk that has the "directory-name" on it (usually address "195").

To make changes to this file, you must edit it directly. For example, say we had the following line in the DIRECT PARMS file:

    DIRMAINT RDIRM USER 195

and we wanted to change the password to "NEWORD." We would change the entry to look like this:

    DIRMAINT NEWORD USER 195

It is important that you compare the files to make sure that the DIRECT PARMS A file contains all of the functions contained in the DIRECT PARMS U file and the DIRECT FMTPARMS A file. When you are satisfied that the DIRECT PARMS A file is complete, you should erase the DIRECT FMTPARMS A file. For security reasons, logon to the MAINT userid and erase the DIRECT PARMS U file.

Next, you need to compare the contents of the following files:

    DASD   PARMS   A
    DASD   PARMS   U
    DASD   FMTPARMS A (if it exists)

The DASD PARMS file contains the virtual address, volid, and device type for each DASD device in the system. The virtual address must be the same as the real address.

It is important that you compare the files to make sure that the DASD PARMS A file contains all of the functions contained in the DASD PARMS U file and the DASD FMTPARMS A file. When you are satisfied that the DASD PARMS A file is complete, you should erase the DASD FMTPARMS A file.

Next, you need to compare the contents of the following files:

```
TAPE    PARMS    A
TAPE    PARMS    U
TAPE    FMTPARMS  A (if it exists)
```

The TAPE PARMS file contains the real address, device type, and density (6250 or 1600 Bytes per inch [BPI]) for each tape drive on the system.

It is important that you compare the files to make sure that the TAPE PARMS A file contains all of the functions contained in the TAPE PARMS U file and the TAPE FMTPARMS A file. When you are satisfied that the DASD PARMS A file is complete, you should erase the DASD FMTPARMS A file.

Note: For more information about the TAPE PARMS, DIRECT PARMS, and BACKUP RESTORE files, refer to *VM/IPF Release 5 Operation.*

Lastly, you need to compare the contents of the following files:

```
OPS$AUTO EXEC    A
OPS$AUTO EXEC    U
OPS$AUTO FMTEXEC  A (if it exists)
```

It is important that you compare the files to make sure that the OPS$AUTO EXEC A file contains all of the functions contained in the OPS$AUTO EXEC U file and the OPS$AUTO FMTEXEC A file. When you are satisfied that the OPS$AUTO EXEC A file is complete, you should erase the OPS$AUTO FMTEXEC A file.

Log off the SYSDUMP1 userid.

VMUTIL

Log on to the VMUTIL userid using the NOIPL parameter. Issue the following commands:

```
lpl CMS
ACCess (NOPROF
ACCess 300 U
```

Make sure that the 191 disk is accessed as the A-disk.

You need to compare the contents of the following files:

```
PROFILE  EXEC    A
VMUTIL   PROFILE  U
PROFILE  FMTEXEC  A (if it exists)
```

It is important that you compare these files to make sure that the PROFILE EXEC A file contains all of the functions contained in the VMUTIL PROFILE U file and the PROFILE FMTEXEC A file. When you are satisfied that the PROFILE EXEC A file is complete, you should erase the PROFILE FMTEXEC A file.

Next, you need to compare the contents of the following files:

```
WAKEUP  PARMS  A
WAKEUP  PARMS  U
WAKEUP  FMTPARMS A (if it exists)
```

It is important that you compare the files to make sure that the WAKEUP PARMS A file contains all of the functions contained in the WAKEUP PARMS U file and the WAKEUP FMTPARMS A file. When you are satisfied that the WAKEUP PARMS A file is complete, you should erase the WAKEUP FMTPARMS A file.

Log off the VMUTIL userid.

Saving the S-STAT and Y-STAT

After you do any of the following it will be necessary to save the S and Y STATS.

* Load the VM/IPF release 5 product files to the MAINT 19E disk.

* Create or change the SYSTEM NETID file on the MAINT 190 disk.

  The SYSTEM NETID file **must** exist on the MAINT 190 S-disk.

  Log on to the MAINT userid.

  To verify that this file does exist on the S-disk issue the following command:

  ```
  FLIST SYSTEM NETID S
  ```

  If the SYSTEM NETID S file does not exist, you must create it. Refer to the section on page 44 describing the SYSTEM NETID for more information about how to create this file.

  If this file does exist, use the BROWSE command to look at it. For information about how to use the BROWSE command, refer to "BROWSE" on page 175.

  Verify that the file contains the following:

  – An entry that matches your CPU serial number must be specified. When you issue the command

    ```
    Q CPUID
    ```

    you need to be concerned with bytes 3 through 8. For more information about the Q CPUID command, refer to the *CP Command and Reference Manual*.

  – A "nodeid" must be specified, even if your CPU is not connected into a network.

    For more information about nodeid, refer to the *RSCS Program and Operations Manual*.

* Change the RGGU$CTL $UMSG file on the MAINT 19E disk.

Issue the following commands:

```
IPL 190
SAVESYS CMS
```

You have now completed installing IPF Release 5.

Now send a message to all users telling them to re-IPL CMS, thus allowing them to use VM/IPF release 5 dialogs.

Log off the MAINT userid.

Connecting Users to VM/IPF Release 5

You may want to add additional users to the system who wish to use the VM/IPF release 5 General User, Administrator, or Operation dialogs. This section describes the steps needed to add these users to the system.

For any users you add to the system (to use VM/IPF release 5) their minimum storage size must be at least 1M.

Log on to the MAINT userid.

1. Create a directory entry for the user

   Each time that you add a user to the system you can either use the VM/IPF release 5 Dirmaint dialog to create the directory entry for you (as described in the *VM/IPF Administration Guide*), or create the directory entry manually. For the user who wants to use the VM/IPF release 5 Administrator dialogs, use the ADMIN userid (as formatted in "Directory Entries" on page 16) as a guide for creating the new userid.

2. Set up the user's PROFILE EXEC file

   For the user who wants to use the VM/IPF release 5 General User, Administrator, or Operator dialogs, do the following:

   Log on to the newly created userid. Make sure that the 19E disk is accessed as the Y-disk, and the 191 disk is accessed as the A-disk. You may have to FORMAT the 191 disk as the A-disk.

   A sample PROFILE EXEC file exists on the 19E Y-disk. In the sample profile (on the 19E disk) there are 2 statements.

   - &STACK EXEC DTRIPF
   - *&STACK EXEC DTRIPF NOPAN

   The first statement will automatically put the user into the IPF environment. The second statement is commented out.

   If you do not want the user to go directly into the IPF environment, then comment out the first statement (place an "*" as the first character) and delete the "*" from the second statement. This will give the user all the links and accesses for IPF release 5 without going into the IPF environment.

   Use the following command to copy this file to your 191 A-disk.

```
COPYFILE PROFILE EXEC Y = = A
```

You should be aware that the DTRIPF EXEC will link to the following disks:

```
CP LINK MAINT 310 310 RR
CP LINK MAINT 319 319 RR
CP LINK MAINT 31A 31A RR
CP LINK MAINT 325 325 RR
```

In addition:

The General User needs a link to:

MAINT 19E disk.

The System Administrator and the Operator need links to:

MAINT 19E
MAINT 300

The read password for the ISPVM 192 disk must be RISPF. (If the password is not RISPF, then you need to change the IPFFIPF DEFAULT2 file). The read password for the MAINT 310, 319, 31A, and 325 disks must be ALL.

The DTRIPF EXEC will also access the following disks, if they exist and are linked:

```
ACCESS 310 H/H
ACCESS 319 P/P
ACCESS 300 U/U
ACCESS 325 W/W
ACCESS 31A X/X
```

The MAINT 301 disk contains dialog functions for the VM/VSE IPF feature. You should define this disk in MAINT's directory entry only if the VM/VSE IPF feature is installed. The DTRIPF EXEC will also access the following disk, if it exists and is linked:

```
ACCESS 301 V/V
```

In addition to the statement which calls DTRIPF EXEC, you may add other commands to this file which will be executed every time that you log on to this userid and issue the IPL CMS command.

3. For the user who wants to access the VM/IPF release 5 Administrator dialogs, do the following:

Log on to the newly created userid. Make sure there is a link to the 300 disk in the user's directory entry (the DTRIPF EXEC will access it as the U-disk). In addition, make sure the 191 disk is accessed as the A-disk.

A sample RSTADMIN PWLIST file exists on the 300 U-disk. Use the following command to copy this file to the 191 A-disk.

```
COPYFILE RSTADMIN PWLIST U = = A
```

The default first panel for users of the VM/IPF release 5 General User dialogs is IDMUSERP as specified in the @CNTL1@ line of the IPFFIPF DEFAULT2 file. This file exists on the MAINT 310 disk and is shown in Figure 4 on page 55 . The default ISPF application id (applid) is IDM which is also specified in the @CNTL1@ line of the IPFFIPF DEFAULT2 file.

The CNTL1 and CNTL2 lines of IPFFIPF DEFAULT2 H2 file are used to define the VM/IPF default 1st panel and applid for users who have no special requirements, the applids of the Administrator, Operator, and General User, and the VM/IPF maclib disk access mode.

The CNTL2 line defines ISPF Dialog Manager defaults, such as, ISPF userid, DMKSNT name, read password, address, access mode, and maximum virtual machine size allowed to obtain the ISPF DCSS.

The other section of IPFFIPF DEFAULT2 H2 will have the name of the userids that require different first panels.

```
************************************************************************
**          COPYRIGHT: 5748-MS1 (C) COPYRIGHT IBM CORP 1983       **
**          LICENSED MATERIAL  -  PROGRAM PROPERTY OF I B M        **
**          REFER TO COPYRIGHT INSTRUCTIONS: FORM G120-2083        **
**          IPFIPF DEFAULT2    NEW FOR VM/IPF REL 5.    @VBOKFJD   **
************************************************************************
**             D E F A U L T    V M / I P F    L I S T    @VBOKFJD   **
======================================================================
|@LINE1@|@PANELID|@APPLID@|@@@ADM@@|@@@@OPS@@|@@@IDM@@|@@MODE@@|
|col:1-8|col10-17|col19-26|col28-35|col37-44|col46-53|col55-63|
|...+....1....+....2....+....3....+....4....+....5....+....6....+....7

         A       B                 C              D
@CNTL1@  IDMUSERP IDM      ADM       OPS      IDM       H2
======================================================================
|@LINE2@|@USERID@|@DMKSNT@|@READPW@|@ADDRESS|@@MODE@@|@@DCSS@@|
|col:1-8|col10-17|col19-26|col28-35|col37-44|col46-53|col55-63|
|...+....1....+....2....+....3....+....4....+....5....+....6....+....7

         E       F        G         H      I         J
@CNTL2@  ISPVM   ISPDCSS  RISPF     192    I         8192
======================================================================
|@@USER@|@PANELID|@APPLID@|
|col:1-8|col10-17|col19-26|
|...+....1....+....2....+....3....+....4....+....5....+....6....+....7

              K
MAINT     DTR$P    ADM
ADMIN     DTR$P    ADM
OPERATOR  OPS$     OPS
OP1       OPS$     OPS
======================================================================
**            E N D    O F    D E F A U L T    L I S T    @VBOKFJD   **
************************************************************************
*
************************************************************************
**  S T A R T    O F    O P T I O N A L    L I S T                 **
************************************************************************
*
************************************************************************
**    E N D    O F    O P T I O N A L    L I S T                   **
************************************************************************
```

Figure 4. IPFFIPF DEFAULT2 file

A @PANELID is the panelid of the first panel that will be displayed for the specified application, upon entering IPF.

B @APPLID is the application id the user is authorized to use upon entering IPF. In IPF there are three general applications:

IDM - General Use
ADM - Administration
OPS - Operation

Note: The panel specified under @@PANELID must be contained within the application specified under @@APPLID. In other words, you cannot specify the panelid OPS$11 if the applid specified is ADM. OPS$11 is a panel contained within the Operations application, not the Administration application.

C @@@ADM@@, @@@OPS@@, and @@@IDM@@ are the application tables you can use.

D @@MODE@@ is the access mode of the 310 disk. The 310 disk is where the maclibs are stored, the IPFFIPF DEFAULT2 file is located, and where the CLRSCRN MODULE is located.

E @USERID@ is the userid of the virtual machine containing the dialog manager code.

F @DMKSNT@ is the name of the shared segment for ISPF.

G @READPW@ is the readshare password for ISPVM.

H @ADDRESS@ is the address of ISPVM's disk where the code is stored.

I @@MODE@@ is the access mode of that same disk where the code is stored.

J @@DCSS@@ is the starting address of the shared segment.

K @@USER@ is the name of the userid which require a different first panel than the one defaulted to the general user.

Note: It is important that all these variables start and end in the columns specified in the file.

If I, as a general user, wanted to use the DIRMAINT dialogs, then the following entry would have to be placed in the DEFAULT2 file as follows:

Starting in column 1, under @@USER @, I need the entry: JUNELJ

Starting in column 10, under @PANELID, I need the entry: DIR$P

Starting in column 19, under @APPLID@, I need the entry: ADM (for ADMINISTRATOR)

So the IPFFIPF DEFAULT2 file will now look like this:

```
*****************************************************************
**          COPYRIGHT: 5748-MS1 (C) COPYRIGHT IBM CORP 1983          **
**          LICENSED MATERIAL  -  PROGRAM PROPERTY OF I B M          **
**          REFER TO COPYRIGHT INSTRUCTIONS: FORM G120-2083          **
**          IPFFIPF DEFAULT2    NEW FOR VM/IPF REL 5.      @VBOKFJD  **
*****************************************************************
**               D E F A U L T    V M / I P F    L I S T    @VBOKFJD  **
=================================================================
|@LINE1@|@PANELID|@APPLID@|@@@ADM@@|@@@OPS@@|@@@IDM@@|@@MODE@@|
|col:1-8|col10-17|col19-26|col28-35|col37-44|col46-53|col55-63|
|...+....1....+....2....+....3....+....4....+....5....+....6....+....7
@CNTL1@  IDMUSERP IDM      ADM      OPS      IDM      H2
=================================================================
|@LINE2@|@USERID@|@DMKSNT@|@READPW@|@ADDRESS|@@MODE@@|@@DCSS@@|
|col:1-8|col10-17|col19-26|col28-35|col37-44|col46-53|col55-63|
|...+....1....+....2....+....3....+....4....+....5....+....6....+....7
@CNTL2@  ISPVM    ISPDCSS  RISPF    192      I        8192
=================================================================
|@@USER@|@PANELID|@APPLID@|
|col:1-8|col10-17|col19-26|
|...+....1....+....2....+....3....+....4....+....5....+....6....+....7
MAINT    DTR$P    ADM
ADMIN    DTR$P    ADM
OPERATOR OPS$     OPS
OP1      OPS$     OPS
JUNELJ   DIR$P    ADM
=================================================================
**               E N D    O F    D E F A U L T    L I S T    @VBOKFJD  **
*****************************************************************
*
*****************************************************************
**   S T A R T     O F      O P T I O N A L     L I S T            **
*****************************************************************
*
*****************************************************************
**    E N D       O F      O P T I O N A L     L I S T            **
*****************************************************************
```

Figure 5. IPFFIPF DEFAULT2 file with userid added

You need to have write access to MAINT's 310 disk to make any changes to the
IPFFIPF DEFAULT2 file

For users who are to have access to the privileged functions of VM/IPF release 5,
their userid must be specifically listed in the IPFFIPF DEFAULT2 file, along with
the panelid of the first panel to be displayed, and the application id (ADM or
OPS). You would enter the data as shown in the above example of giving the
specified user (JUNELJ) access to the DIRMAINT dialogs, which are a part of the
Administration application (ADM).

The userids of those users who are to have access to the privileged VM/IPF release
5 Dirmaint dialog must also be entered in the DIRM__STAFF list in the
DIRMAINT DATA file. This file exists on the MAINT 319 disk. See the
description of VM/Directory Maintenance in "Notes on Installation of Other
Products" on page 6.

Part 3. IPF Components Using MAINT

The MAINT userid is traditionally used by the system programmer to do system
maintenance activities and installation. MAINT is a privileged userid that "owns"
all the system files. See "Chapter 2. Planning" on page 4 for a list and description
of all the minidisks associated with the MAINT userid.

The following two chapters: "Chapter 4. System Support" on page 60 and
"Chapter 5. RSCS (Remote Spooling Communications Subsystem)" on page 89,
describe tasks that can be done from the userid of MAINT. Before using the
panels in these two chapters, you should be familiar with the concepts of servicing
your system and with networking. Users logged on as MAINT should be
experienced enough so as not to inadvertently cause damage to the system.

4

Chapter 4. System Support

System Support is a term used to describe some ways in which you can make changes to products of VM/IPF. To use the System Support panels described in this book, you must have knowledge of how computer systems operate and of terms such as: service, update, macro, nucleus, source code, load maps, text decks and so forth.

Using the panels described in this chapter, you can make changes to your system and to program products you use. When you make any of these changes you are "servicing" your system. These changes help "support" the system you are using; thus the term "System Support." The System Support panels described in this chapter help you "apply service" (make changes) to the system or to products you use.

Note: System Support is run under the userid MAINT.

```
┌─────────────────────────────────────────────────────────────────────────────┐
│  100$3                         SYSTEM SUPPORT                       Primary   │
│  ---------------------------------------------------------------------------  │
│                                                                               │
│         Select an option from the following list.                            │
│                                                                               │
│                  1  Service, refresh, or tailor CP and CMS.                   │
│                                                                               │
│                  2  Service Program Products (other than CP and CMS).         │
│                                                                               │
│                  3  EP/VS Product Tailoring.                                  │
│                                                                               │
│                  4  Review system profile.                                    │
│                                                                               │
│                  5  Use the CP directory map.                                 │
│                                                                               │
│                  6  Restore a Discontiguous Shared Segment                    │
│                                                                               │
│     Note.To use System Support, you must be logged on as the userid MAINT.    │
│  ---------------------------------------------------------------------------  │
│  PF: 1  Help     2  Rdrlist  3  End      4  Return    5  Cmd      6  Index     │
│  PF: 7  ...      8  ...      9  Probrep  10 ...        11 ...     12 Cursor    │
│                                                                               │
│  ===>  _                                                                      │
└─────────────────────────────────────────────────────────────────────────────┘
```

Figure 6. System Support - Primary Menu.

```
┌──────────────────┐
│     System       │
│  Administrator   │
│     Tasks        │
└────────┬─────────┘
         │
        5│
┌────────┴─────────┐
│     System       │
│    Support       │
└──────────────────┘
```
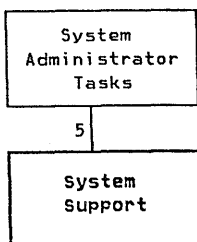
The panel in Figure 6 is your primary menu panel. These six options are the main tasks that you can do. If, after reading this panel, you are not sure where to go, look in the table of contents or the index in this book, for the task you want. Then go to the page where the task is described. The panel map will help you get to the task.

The menu panel in Figure 6 lets you choose from the following:

Service, refresh, or tailor CP and CMS

When you select option 1 and press the ENTER key, you will see a menu panel with eight options to choose from. You can refresh VM/SP with a new release

of VM/SP, apply VM/SP service from a PUT tape (Program Update Tape), apply corrective service to your system, tailor your system, build and load a CP nucleus or CMS nucleus, or read a CP or a CMS load map from your reader.

Service Program Products

When you select option 2 and press the ENTER key, you will see the task panel in Figure 16 on page 82. You can apply a service update to program products other than CP and CMS.

EP/VS Product Tailoring

Although EP/VS Product Tailoring is a task you can do using IPF panels and prompts, the panels dealing with emulation programs (EP/VS) will not be discussed in this book. You can refer to the following manuals for information about emulation programs:

> *IBM 3704 and 3705 Communications Controllers Principles of Operation*
> *IBM 3704 and 3705 Control Program Generation and Utilities Guide and Reference Manual*
> *VM/SP Planning and System Generation Guide* (if using VM/SP release 2)
> *VM/SP Installation Guide* (if using VM/SP release 3).

To look at the panels dealing with emulation programs, select option 3 and press the ENTER key. You will see a panel titled: **EP/VS Product Tailoring**. (This panel is not pictured in this book.) This is a menu panel with four options to choose from. You can define, create and modify, generate, or save EP/VS. For a brief discussion about these four options and what Emulation Programs are, see "EP/VS Product Tailoring" on page 84.

Review system profile

When you select option 4 and press the ENTER key you will see a file that you can look at to review your system profile. This file shows: the activity performed (install, refresh, or verify), the date and time the change was made, and which supported product was affected. For an example of data in your system profile and for more information about your system profile, see "System Profile" on page 86.

Use the CP directory map

When you select option 5 and press the ENTER key you will see several panels about the CP directory. These panels are described in the *VM/IPF Administration Guide*.

Restore a Discontiguous Shared Segment

When you select option 6 and press the ENTER key, you will see the data entry panel in Figure 17 on page 87. You can use that panel to restore a discontiguous shared segment.

```
100$4              SERVICE, REFRESH, or TAILOR CP and CMS
------------------------------------------------------------------------------

   Select an option from the following list.

              1  Refresh VM/SP (with a new release of VM/SP System).
              2  Apply VM/SP service (from PUT tape).

              3  Apply corrective service (to your system).
              4  Tailor your system.

              5  Build and load a CP nucleus.
              6  Build and load a CMS nucleus.

              7  Read CP load map from your reader.
              8  Read CMS load map from your reader (and save
                 CMS segments).


------------------------------------------------------------------------------
   PF: 1  Help      2  Rdrlist  3  End       4  Return    5  Cmd      6  Index
   PF: 7  ...       8  ...      9  Probrep  10  ...       11  ...     12  Cursor

   ===>  _
```

Figure 7. Service, Refresh, or Tailor CP and CMS.

```
┌───────────────────┐
│      System       │
│  Administrator    │
│      Tasks        │
└───────────────────┘
       5│
┌───────────────────┐
│      System       │
│     Support       │
└───────────────────┘
       1│
┌───────────────────┐
│  Service,         │
│  Refresh, or      │
│  Tailor CP/CMS    │
└───────────────────┘
```
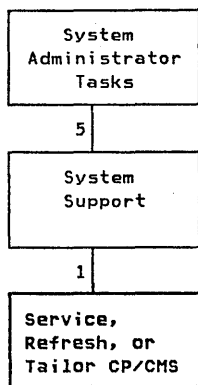
The panel shown in Figure 7 is a menu panel with eight CP and CMS service tasks you can do. The following pages will discuss panels that you can use to help you to do the first six tasks. Options 7 and 8 will be done automatically by the system, once you select either option and press the ENTER key. The first option we will discuss is to refresh VM/SP with a new release of the VM/SP System (option 1).

```
  100$41                              REFRESH VM/SP
  ------------------------------------------------------------------------------
  Type in the required data and press ENTER.

   All users must log off before you use this panel;  otherwise, any
   user still on the system will experience errors.

        Tape drive address: ___          Enter the virtual address where the VM/SP
                                          product tape is mounted.


        Disk address:         123        Enter the real address of the DASD
                                          that will give you read and write
                                          access to the system residence volume.

     Note:  Refresh VM/SP only loads MAINT's disks 194, 190 and 19D.  The system
            will be automatically IPL'ed.  You must then reenter the IPF environment
            to build and load both the CP nucleus and the CMS nucleus, and to read
            the load maps.
  ------------------------------------------------------------------------------
  PF: 1  Help     2  Rdrlist  3  End       4  Return   5  Cmd      6  Index
  PF: 7  ...      8  ...      9  Probrep  10  ...      11  ...     12  Cursor

  ===>
```

Figure 8. Refresh VM/SP.

```
   ┌──────────────┐
   │   System     │
   │Administrator │
   │   Tasks      │
   └──────────────┘
       5│
   ┌──────────────┐
   │   System     │
   │   Support    │
   └──────────────┘
       1│
   ┌──────────────┐
   │  Service,    │
   │  Refresh or  │
   │ Tailor CP/CMS│
   └──────────────┘
       1│
   ┌──────────────┐
   │   Refresh    │
   │    VM/SP     │
   └──────────────┘
```

Whenever you get a new release of VM/SP, you need to refresh your current system to reflect the changes. Refresh VM/SP lets you replace the CP and CMS products of the VM/SP System with a more current release level of the VM/SP System. When you refresh a system, the sequence or results of processing of the program products you are currently using are not changed. The panel in Figure 8 asks you for the following information:

Tape Drive Address

This is the **virtual** address where you have the system product tape mounted. The system uses this address to find the tape you want to use. Addresses must be *exactly* three characters long and in hexadecimal form.

The address you specified will be attached as virtual address 181. If another tape is attached to the MAINT userid as virtual 181, then that tape will be detached so that the real address you enter on the panel can be attached as your 181.

Disk Address

This is the address of the minidisk that gives you read and write access to the system residence volume (the volume on which the CP nucleus of VM/SP is located).

EXAMPLE: 123

123 is the full pack minidisk defined in MAINT's directory entry for the VM/SP System residence volume.

Note: 123 is the system default address. It is not recommended that you change this address. The address 123 is used in DMKSYS, the directory, and the service environment. Since this address is used in other places other than for the minidisk address, do not change it unless you know for sure where else to make changes.

This refresh function will format MAINT's disks as follows:

```
194 = CP text decks
294 = CP service disks
293 = CMS service disks
```

The VM/SP product tape contents will be loaded as follows:

```
190 = EREP text files and CMS system files (for VM/SP release 2)
201 = EREP text files and CMS system files (for VM/SP release 3)
194 = CP text files
19D = Help files
```

More information can be found on the Refresh function in the *VM/SP Planning and System Generation Guide*.

Once the refresh function has been completed there will be an automatic System IPL done by the system. This System IPL will cause you to exit from IPF. You must return to the IPF environment to "Build and Load a CP Nucleus" on page 65 and to "Read CP Load Map From Your Reader" on page 67. In addition you will have to "Build and Load a CMS Nucleus" on page 68 and "Read CMS Load Map From Your Reader" on page 70.

Build and Load a CP Nucleus

```
100$N5                        BUILD AND LOAD CP NUCLEUS
-----------------------------------------------------------------------------
Type in the required data and press ENTER.

  Once you decide to build a CP nucleus and press the ENTER key, the system
  will ask you several questions before building a nucleus.  To answer them
  correctly, refer to the VM/SP Planning and System Generation Guide (if using
  VM/SP release 2) or the VM/SP Installation Guide (if using VM/SP release 3).

  When you have answered all the questions, the system will begin to build
  a CP nucleus.  After the nucleus is built, it will be loaded and you will go
  into a CP wait state.  You must then IPL 190;  thus, the nucleus map will be
  put into your reader.  You will exit from the IPF environment during the
  build process.  Reenter IPF and read in the CP load map using the Service,
  Refresh, or Tailor CP and CMS task panel.

  Type an "X" next to Yes or No.
      Do you want to continue to build and load a CP nucleus?    X Yes  _  No
-----------------------------------------------------------------------------
  PF: 1  Help     2  Rdrlist  3  End      4  Return   5  Cmd      6  Index
  PF: 7  ...       8  ...       9  Probrep  10  ...     11  ...      12  Cursor

  ===>
```

Figure 9. Build and Load CP Nucleus.

```
+------------------+
|     System       |
|  Administrator   |
|     Tasks        |
+------------------+
        |
       5|
+------------------+
|     System       |
|    Support       |
+------------------+
        |
       1|
+------------------+
|    Service,      |
|   Refresh or     |
|  Tailor CP/CMS   |
+------------------+
        |
       5|
+------------------+
|   Build and      |
|   Load CP        |
|   Nucleus        |
+------------------+
```
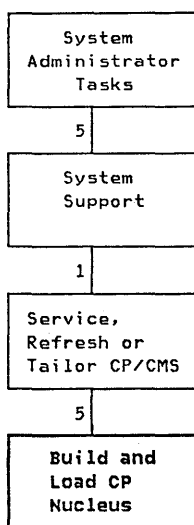
Whenever you create a new text deck or make changes to the CP system where you are required to IPL the system, a new nucleus must be built. You also need to build and load a CP nucleus after you refresh the VM/SP system or you have applied CP service. The nucleus is the part of the control program that is resident in main storage. The nucleus that you create contains all these changes and all the programs and text decks already used within the system.

When you select option 5 on the panel in Figure 7 on page 62, you will see the panel shown above. You would use this panel anytime you wanted to build and load a new CP nucleus.

Note: If you want to use the system default on the panel, then simply press the ENTER key. If you do not want to use the system default, make sure you enter a blank in the default area. If you type an X in both fields, you will receive an error message from the system.

This panel asks the following:

```
Do you want to continue to build and load a CP nucleus?
X Yes _ No
```

If you reply No:

> You will exit from this panel and go back to the menu panel in Figure 7 on page 62.

If you reply Yes (the default):

You will be asked if you want to reassemble the system definition files (DMKRIO, DMKSNT, DMKSYS). For help in answering this question, refer to:

VM/SP Planning and System Generation Guide (if using VM/SP release 2)
VM/SP Installation Guide (if using VM/SP release 3).

If you answer yes to reassemble the system definition files, the system will assemble the files for you. Once the assemblies are complete, the system will continue with the build and load of the CP nucleus. Otherwise, the system will not assemble the files and will continue with the build and load of the nucleus.

When the build is complete, you will see the following message:

```
AN IPL'ABLE CP NUCLEUS EXISTS IN YOUR VIRTUAL CARD
READER.  DO YOU WISH TO CREATE AN IPL'ABLE TAPE (FOR
BACK-UP), OR LOAD THE NUCLEUS ON YOUR READER DIRECTLY
TO YOUR SYSTEM RESIDENCE DISK VOLUME?
  ENTER:  (DISK | TAPE).
```

Respond accordingly.

Next you will see:

```
WHEN YOU RECEIVE THIS MESSAGE: NUCLEUS LOADED ON 'VOLID',
-  ENTER  'IPL 190 PARM AUTOCR SEG='
TO PUT THE CP LOAD MAP ONTO YOUR 194 MINIDISK, AFTER THE IPL
-  ENTER: GENERATE MAP.
```

You have two options here.

1. Enter the command: IPL 190 PARM AUTOCR SEG=.

   Enter the command: GENERATE MAP.

   Once the IPL is complete, the CP load map will be read from your reader.

2. Enter the command: IPL 190 PARM AUTOCR SEG=.

   This will cause you to exit from the IPF environment. Once the IPL is complete, return to IPF and read in the CP load map, using option 7 on the panel in Figure 7 on page 62.

Read CP Load Map From Your Reader
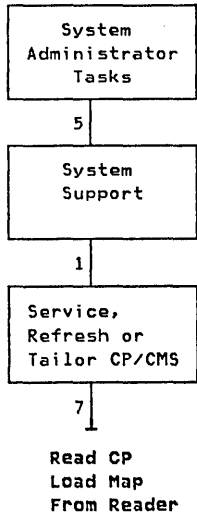
```
┌─────────────────────┐
│      System         │
│   Administrator     │
│      Tasks          │
└─────────────────────┘
        5│
┌─────────────────────┐
│      System         │
│     Support         │
│                     │
└─────────────────────┘
        1│
┌─────────────────────┐
│   Service,          │
│   Refresh or        │
│   Tailor CP/CMS     │
└─────────────────────┘
        7│
      Read CP
      Load Map
      From Reader
```

Whenever you build and load a nucleus for your system, you need to read the load map that was created and put into your reader. You would use this option if you did **not** enter the command: GENERATE MAP, when building and loading a CP nucleus. If you select option 7 on the panel in Figure 7 on page 62, the system will automatically read in the CP load map.

Next the system will ask you which nucleus are you loading. Answer accordingly, and the system will display a message telling you which nucleus has been written on Mdisk 194. The CP load map will be saved on the disk that the GENERATE EXEC specifies.

You must now shutdown your system and re-IPL it. With the IPL complete, you have successfully built, loaded and read in a CP nucleus for your system.

Build and Load a CMS Nucleus

Build and Load a CMS Nucleus

```
  ┌─────────────────────────────────────────────────────────────────────────────┐
  │                                                                               │
  │   100$N6                        BUILD AND LOAD CMS NUCLEUS                     │
  │   ------------------------------------------------------------------------    │
  │                                                                               │
  │   Type in the required data and press ENTER.                                  │
  │                                                                               │
  │    Once you decide to build a CMS nucleus and press the ENTER key, the system │
  │    will ask you several questions before building a nucleus.  To answer them  │
  │    correctly, refer to the VM/SP Planning and System Generation Guide (if using│
  │    VM/SP release 2) or the VM/SP Installation Guide (if using VM/SP release 3).│
  │                                                                               │
  │    When you have answered all the questions, the system will display CMS      │
  │    build parameters.  You will have one more opportunity to exit before       │
  │    building a CMS nucleus.  After the nucleus is built, it will be loaded.     │
  │    You must then IPL 190.  You will exit from the IPF environment during the   │
  │    build process.  Reenter IPF and read in the CMS load map using the Service, │
  │    Refresh, or Tailor CP and CMS task panel.                                  │
  │                                                                               │
  │    Type an "X" next to Yes or No.                                             │
  │        Do you want to continue to build and load a CMS nucleus?    X Yes _ No │
  │   ------------------------------------------------------------------------    │
  │   PF: 1  Help     2  Rdrlist  3  End      4  Return   5  Cmd      6  Index     │
  │   PF: 7  ...      8  ...      9  Probrep  10 ...      11 ...      12 Cursor    │
  │                                                                               │
  │   ===>                                                                         │
  │                                                                               │
  └─────────────────────────────────────────────────────────────────────────────┘
```
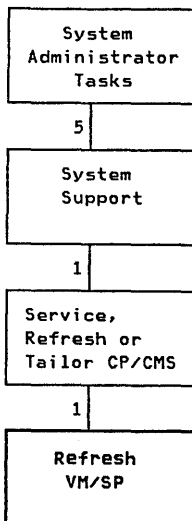
Figure 10. Build and Load CMS Nucleus.

```
┌─────────────────┐
│    System       │
│ Administrator   │
│    Tasks        │
│       ┌───┐     │
│       │ 5 │     │
├───────┴───┴─────┤
│    System       │
│    Support      │
│       ┌───┐     │
│       │ 1 │     │
├───────┴───┴─────┤
│   Service,      │
│   Refresh or    │
│  Tailor CP/CMS  │
│       ┌───┐     │
│       │ 6 │     │
├───────┴───┴─────┤
│   Build and     │
│   Load CMS      │
│   Nucleus       │
└─────────────────┘
```
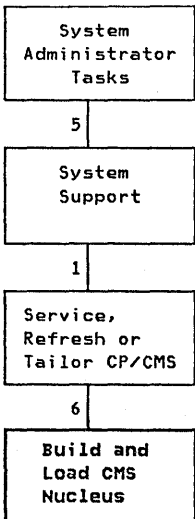
Whenever you create a new text deck or make changes to the CMS system where you are required to IPL the system, a new nucleus must be built. You also need to build and load a CMS nucleus after you refresh the VM/SP system or after you have applied CMS service. The nucleus is the part of the control program that is resident in main storage. The nucleus that you create contains all these changes and all the programs and text decks already used within the system.

When you select option 6 on the panel in Figure 7 on page 62, you will see the panel shown above. You would use this panel anytime you wanted to build and load a new CMS nucleus.

Note: If you want to use the system default on the panel, then simply press the ENTER key. If you do not want to use the system default, make sure you enter a blank in the default area. If you type an X in both fields you, will receive an error message from the system.

This panel asks the following:

```
Do you want to continue to build and load a CMS nucleus?
X Yes _ No
```

If you reply No:

>   You will exit from this panel and go back to the menu panel in Figure 7 on page 62 .

If you reply Yes (the default):

The system will display the following note:

```
                          ***NOTE***
AT THE END OF THIS STEP YOU WILL BE TOLD THAT YOU CAN ENTER
THE COMMAND 'GENERATE MAP' TO READ IN THE CMS LOAD MAP.  IF
YOU DECIDE TO ENTER THIS COMMAND AT THIS TIME THEN YOU MUST
SAVE THE SHARED SEGMENTS MANUALLY.
```

The system asks you several questions where you will be required to enter
data to successfully build and load a CMS nucleus. For help in answering
these system questions, refer to:

> *VM/SP Planning and System Generation Guide* (if using VM/SP release 2)
> *VM/SP Installation Guide* (if using VM/SP release 3).

Once the nucleus is built, you will be asked whether or not you want to save a
copy of the CMS nucleus as a disk file. Respond accordingly.

Once you have answered that question, the following messages will be
displayed:

```
THE LOADMAP FOR THE CMS NUCLEUS SHOULD BE SAVED ON MDISK 191.
WHEN THIS STEP COMPLETES, RE-IPL THE CMS SYSTEM (I 190) AND
ENTER:  GENERATE MAP.
```

Note: As stated in the ***NOTE*** above, if you enter the command:
GENERATE MAP manually, then you must save the shared segments.

```
CMS LOAD MESSAGES APPEAR NEXT, RESPOND AS INDICATED IN PART 3
OF THE PLANNING AND SYSGEN GUIDE IF THE PROCEDURE WAS FOLLOWED.
OTHERWISE, SEE CHAPTER 40 FOR RESPONSE DETAILS.
```

When you have answered all the questions, the system will finish the build and
load of the CMS nucleus.

You have two options here.

1. Enter the command: IPL 190 PARM AUTOCR SEG=

    Enter the command: GENERATE MAP

    Once the IPL is complete, the CMS load map will be read from your
    reader.
    You will exit from IPF and the shared segments will not be saved.
    For more information on how to save the shared segments, refer to:

    > *VM/SP Planning and System Generation Guide* (if using VM/SP
    > release 2)
    > *VM/SP Installation Guide* (if using VM/SP release 3).

2. Enter the command: IPL 190 PARM AUTOCR SEG=

    This will cause you to exit from the IPF environment. Once the IPL is
    complete, return to IPF and read in the CMS load map, using option 8 on
    the panel in Figure 7 on page 62.

Read CMS Load Map From Your Reader
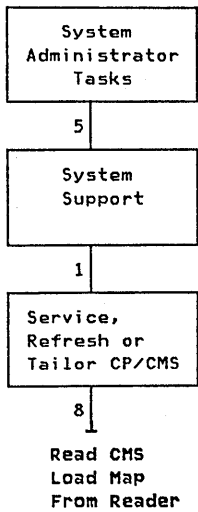
```
┌─────────────────┐
│     System      │
│  Administrator  │
│     Tasks       │
└───────┬─────────┘
      5 │
┌───────┴─────────┐
│     System      │
│    Support      │
└───────┬─────────┘
      1 │
┌───────┴─────────┐
│    Service,     │
│   Refresh or    │
│  Tailor CP/CMS  │
└───────┬─────────┘
      8 │
        ┴
      Read CMS
      Load Map
      From Reader
```

Whenever you build and load a nucleus for your system, you need to read the load map that was created in your reader. You would use this option if you did **not** enter the command: GENERATE MAP, when building and loading a CMS nucleus. If you select option 8 on the panel in Figure 7 on page 62, the system will automatically read in the CMS load map.

Next the system will display a message telling you that the CMSNUM MAP has been saved. The CMS load map will be saved on the disk that the GENERATE EXEC specifies.

In addition, the system will save shared segments. CMS segments CMSSEG and CMSDOS are the segments that will be restored. Note however, that both segments will be restored when you use VM/SP release 2; but, CMSSEG will **not** be restored when you use VM/SP release 3.

Once the system does the save, messages will be displayed telling you that the load maps for the segments have been loaded. Next the following message will be displayed.

```
AN IPL WILL NOW BE PERFORMED TO SAVE THE NEW CMS SYSTEM.
DO NOT PRESS ENTER WHEN YOU ARE PUT IN THE VM READ AFTER
THE IPL.  INSTEAD,

ENTER ONE OF THE FOLLOWING COMMMANDS AND THEN PRESS ENTER:

                     SAVESYS CMS
```

With the command entered, you have successfully built, loaded and read in a CMS nucleus for your system.

```
/----------------------------------------------------------------------------\
|                                                                             |
|   100$44                          APPLY VM/SP SERVICE                       |
|   ------------------------------------------------------------------------- |
|                                                                             |
|   Type in the required data and press ENTER.                                |
|                                                                             |
|   Mount and ready the PUT tape on a tape drive.                             |
|                                                                             |
|       Tape drive address:      ___        Enter the real tape drive address |
|                                           where the PUT tape is mounted.     |
|                                                                             |
|   Type an "X" next to Yes or No.                                            |
|                                                                             |
|       Do you want a printout of the memo to users?        X Yes    No       |
|       Do you want to apply CP service?                    _ Yes  X No        |
|       Do you want to apply CMS service?                   _ Yes  X No        |
|                                                                             |
|   Note:  You can either apply CP service or CMS service;  but, you cannot    |
|          do both at the same time.                                          |
|                                                                             |
|   ------------------------------------------------------------------------- |
|   PF: 1  Help      2  Rdrlist  3  End        4  Return   5  Cmd      6  Index|
|   PF: 7  ...       8  ...      9  Probrep   10  ...      11  ...     12 Cursor|
|                                                                             |
|   ===>                                                                      |
|                                                                             |
\----------------------------------------------------------------------------/
```

Figure 11. Apply VM/SP Service.

```
+---------------------+
|      System         |
|   Administrator     |
|      Tasks          |
+---------------------+
        5 |
+---------------------+
|      System         |
|      Support        |
+---------------------+
        1 |
+---------------------+
|   Service,          |
|   Refresh or        |
|   Tailor CP/CMS     |
+---------------------+
        2 |
+---------------------+
|      Apply          |
|      VM/SP          |
|      Service        |
+---------------------+
```
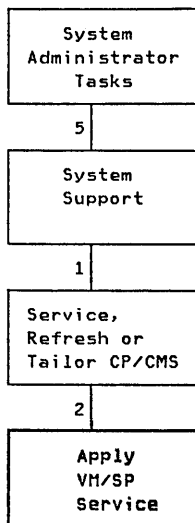
If you select option 2 on the panel in Figure 7 on page 62, you will see the panel shown above. You would use this panel anytime you wanted to apply service to VM/SP.

IBM distributes system PUT tapes (Program Update Tape), containing service updates for VM/SP and other licensed programs. Using the panel in Figure 11, you can apply CP service or CMS service, however, not at the same time. You can also get a printout of the memo to users.

Note: If you try to apply CP service and CMS service at the same time, you will get an error message from the system. Moreover, if you type an X in **both** fields for any one or all of the questions, you get an error message from the system. If you do not want to use the system default, make sure you enter a blank in the default area, and an X in the area you want to use.

This panel asks the following:

```
Do you want a printout of the memos to users for VM/SP?
X Yes  _  No
```

These memos give you step-by-step instructions for applying updates. They also tell you whether you must do additional steps during the execution of VMSERV to build a new nucleus. (VMSERV is a service exec on the PUT tape.)

Type an X in the field you want. The default is Yes.

```
Do you want to apply CP service?  _ Yes  X No
```

When you are applying service to CP, the system asks you several questions.
The VM/IPF service memo helps you answer these questions.

To apply CP service you must do the following:

1. Type the real **Tape drive address**. The system uses this address to find the
    tape you want to use.

    The real address you specified will be attached as virtual address 181. If
    another tape is attached to the MAINT userid as virtual 181, then that tape
    will be detached so that the real address you enter on the panel can be
    attached as your 181.

2. Answer the following questions as shown. Notice that the defaults listed
    on the panel may have been changed. You must type an X next to Yes or
    No but not **both**.

    ```
    Do you want to apply CP service?    X Yes  _  No

    Do you want to apply CMS service?    _ Yes  X No
    ```

    The system loads the new VM/SP CP text decks on MAINT 194 and the
    AUX/UPDATE files on MAINT 294.

    When this is finished, the system builds and loads a CP nucleus for you. For
    information about building and loading a CP nucleus, see "Build and Load a
    CP Nucleus" on page 65.

    Once the build and load is complete you need to "Read CP Load Map From
    Your Reader" on page 67.

```
Do you want to apply CMS service?  _Yes  X No?
```

When you are applying service to CMS, the system asks you several questions.
The VM/IPF service memo helps you answer these questions.

To apply CMS service you must do the following:

1. Type the real **Tape drive address**. The system uses the address to find the
    tape you want to use.

    The real address you specified will be attached as virtual address 181. If
    another tape is attached to the MAINT userid as virtual 181, then that tape
    will be detached so that the real address you enter on the panel can be
    attached as your 181.

2. Answer the following questions as shown. Notice that the defaults listed
    on the panel may have been changed. You must type an X next to Yes or
    No but not **both**.

    ```
    Do you want to apply CP service?    _ Yes  X No

    Do you want to apply CMS service?   X Yes  _  No
    ```

The system loads the new VM/SP CMS text decks on MAINT 190 and the AUX/UPDATE file on MAINT 293.

Once the service has been loaded, you will be asked several questions. The system will begin to build and load a CMS nucleus.

For information about building and loading a CMS nucleus, see "Build and Load a CMS Nucleus" on page 68.

Once the build and load is complete you need to "Read CMS Load Map From Your Reader" on page 70.

```
100$CS                     APPLY CORRECTIVE SERVICE
-----------------------------------------------------------------------------


Select an option for the following list.


          1   Explain how to apply an APAR fix to your system.

          2   Explain how to apply an APAR fix to a macro library.

          3   Explain how to apply ZAPS.

          4   Update a macro library.

          5   Update and assemble source code.



-----------------------------------------------------------------------------
PF: 1  Help      2  Rdrlist  3  End       4  Return   5  Cmd      6  Index
PF: 7  ...       8  ...      9  Probrep  10  ...      11  ...     12  Cursor

===>  _
```
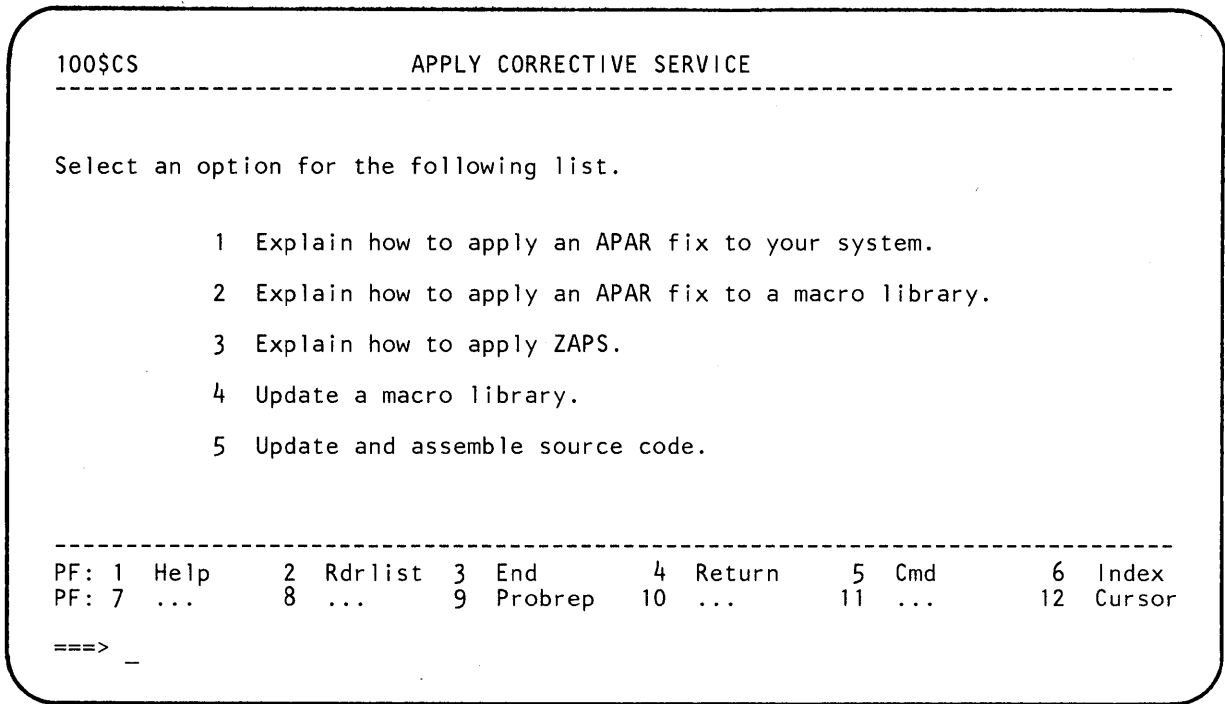
Figure 12. Apply Corrective Service.

```
+--------------+
|    System    |
| Administrator|
|    Tasks     |
+--------------+
     5|
+--------------+
|    System    |
|   Support    |
+--------------+
     1|
+--------------+
|  Service,    |
| Refresh or   |
| Tailor CP/CMS|
+--------------+
     3|
+--------------+
|    Apply     |
|  Corrective  |
|   Service    |
+--------------+
```
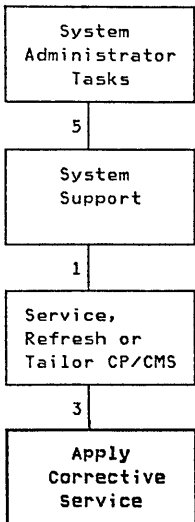
When you select option 3 on the panel in Figure 7 on page 62, you will see the panel shown above. You would use this panel anytime you wanted to apply corrective service to your system.

You can look at three **explanations** of types of corrective service: applying APAR fixes to your system, applying APAR fixes to a macro library, and applying ZAPs (options 1,2, and 3 respectively, on the panel in Figure 12). The panels dealing with APAR fixes and ZAPS are merely explanations of how to apply those types of corrective service. In addition, you can apply an update to a macro library or update and assemble source code.

You can apply corrective service to your system in several ways. APARs (Authorized Program Analysis Reports) are commonly used to report problems in programs. Using system support options you can look at an explanation of how to apply an APAR fix to your system or to a macro library.

Another way to apply corrective service to your system is by using a ZAP. ZAP is a CMS command that dumps or changes the contents of MODULE, LOADLIB, or TXTLIB files. In some cases, ZAPs are used to fix a problem.

Whenever you apply an APAR fix or use a ZAP to fix a problem, updates must also be applied. With the use of the panel in Figure 12, you can update a macro library as well as update and assemble source code.

Explain How to Apply an APAR Fix
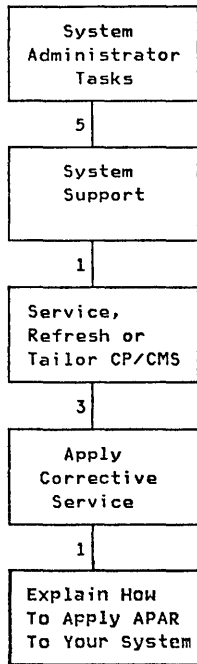
To Your System

```
┌─────────────────┐
│     System      │
│  Administrator  │
│      Tasks      │
└─────────────────┘
      5 │
┌─────────────────┐
│     System      │
│     Support     │
│                 │
└─────────────────┘
      1 │
┌─────────────────┐
│   Service,      │
│   Refresh or    │
│  Tailor CP/CMS  │
└─────────────────┘
      3 │
┌─────────────────┐
│     Apply       │
│   Corrective    │
│    Service      │
└─────────────────┘
      1 │
┌─────────────────┐
│  Explain How    │
│  To Apply APAR  │
│  To Your System │
└─────────────────┘
```

When you select option 1 and press the ENTER key, you will see the first of many panels **explaining** how to apply an APAR fix to your system. Refer to these explain panels for information about how to apply an APAR fix to your system.

To a Macro Library
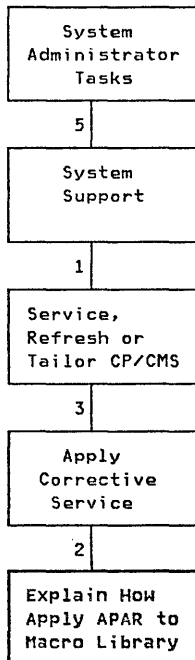
```
┌─────────────────┐
│     System      │
│  Administrator  │
│      Tasks      │
└─────────────────┘
      5 │
┌─────────────────┐
│     System      │
│     Support     │
│                 │
└─────────────────┘
      1 │
┌─────────────────┐
│   Service,      │
│   Refresh or    │
│  Tailor CP/CMS  │
└─────────────────┘
      3 │
┌─────────────────┐
│     Apply       │
│   Corrective    │
│    Service      │
└─────────────────┘
      2 │
┌─────────────────┐
│  Explain How    │
│  Apply APAR to  │
│  Macro Library  │
└─────────────────┘
```

When you select option 2 and press the ENTER key, you will see the first of many panels **explaining** how to apply an APAR fix to a macro library. Refer to these explain panels for information about how to apply an APAR fix to a macro library.

Explain How to Apply ZAPs

```
┌─────────────────┐
│     System      │
│ Administrator   │
│     Tasks       │
└─────────────────┘
       5│
┌─────────────────┐
│     System      │
│    Support      │
│                 │
└─────────────────┘
       1│
┌─────────────────┐
│    Service,     │
│   Refresh or    │
│  Tailor CP/CMS  │
└─────────────────┘
       3│
┌─────────────────┐
│     Apply       │
│   Corrective    │
│    Service      │
└─────────────────┘
       3│
┌─────────────────┐
│   Explain How   │
│   To Apply      │
│     A ZAP       │
└─────────────────┘
```
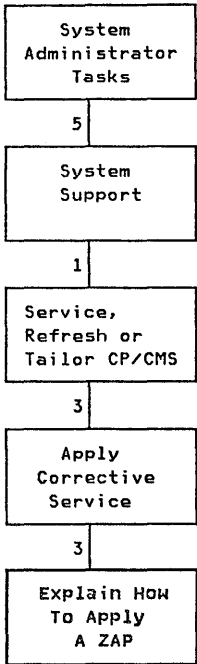
When you select option 3 and press the ENTER key, you will see the first of many panels **explaining** how to apply ZAPs. Refer to these explain panels for information about how to apply ZAPs.

Updates

Update a Macro Library

```
┌─────────────────────────────────────────────────────────────────────────────────┐
│                                                                                   │
│   100$CSU                       UPDATE A MACRO LIBRARY                             │
│   -------------------------------------------------------------------------       │
│                                                                                   │
│   Type in the required data and press ENTER.                                      │
│                                                                                   │
│                                                                                   │
│          Maclib name:          _____      Enter the name of the maclib         │
│                                               that contains the member            │
│                                               that requires the APAR.             │
│                                                                                   │
│          Member name:          _____      Enter the name of the member         │
│                                               that requires the APAR.             │
│                                                                                   │
│          Control filename:     _____      Enter the filename of the control    │
│                                               file that provides the proper       │
│                                               sequence for updating the           │
│                                               maclib.                             │
│                                                                                   │
│                                                                                   │
│   -------------------------------------------------------------------------       │
│   PF: 1  Help      2  Rdrlist   3  End       4  Return    5  Cmd      6  Index     │
│   PF: 7  ...       8  ...       9  Probrep  10  ...      11  ...     12  Cursor    │
│                                                                                   │
│   ===>                                                                            │
│                                                                                   │
└─────────────────────────────────────────────────────────────────────────────────┘
```

Figure 13. Update A Macro Library.

```
┌──────────────┐
│   System     │
│ Administrator│
│   Tasks      │
└──────────────┘
      5│
┌──────────────┐
│   System     │
│   Support    │
└──────────────┘
      1│
┌──────────────┐
│  Service,    │
│  Refresh or  │
│ Tailor CP/CMS│
└──────────────┘
      3│
┌──────────────┐
│   Apply      │
│ Corrective   │
│  Service     │
└──────────────┘
      4│
┌──────────────┐
│  Update a    │
│  Macro       │
│  Library     │
└──────────────┘
```

Whenever you want to make changes to the macro library or to the assemble source code, you can do so by applying an update. You can change the existing information or add new information; however, there are certain procedures to follow in either case. The IPF panels dealing with updates help with these procedures.

When you select option 4 on the panel in Figure 12 on page 74, you will see the panel shown above. This panel asks you for the following information:

Maclib name

This is the name of the macro library you want to update.

Member name

This is the name of the member, within the macro library, that you need to apply an APAR fix to. A member is a single part of the macro library (like a macro).

Control filename

This is the name of the control file that contains a list of update files, or auxiliary control files to be updated.

Note: Some knowledge of the update process is required. For information on the UPDATE command and the VMFMAC exec, refer to *VM/SP CMS Command and Macro Reference* . For information on updating the VM/SP system refer to either of the following manuals:

> *VM/SP Planning and System Generation Guide* (if uisng VM/SP release 2)
> *VM/SP Installation Guide* (if using VM/SP release 3)

The VMFMAC exec procedure is specifically designed to update macro libraries. To update a macro library you need the following:

- Update files, with UPDATE control statements to change the macro libraries.

- Any PTFs (Program Temporary Fixes) that have been distributed for the macro library.

- A control file that provides the proper sequence for updating the maclib.

- An EXEC file listing the names of the members to be included in the macro library. (The filename of the exec file you are using must be the same filename as the maclib name you are specifying.)

The following disks (if available) will be accessed in this order:

<div align="center">

294   194 394 293 190 393

</div>

If the member name you specified is not found, the dialog checks to see if the member name begins with **DMK** (CP source files) or **DMS** (CMS source files). If so, you will be asked whether or not you want to have the source file loaded to a temporary disk. If you want to have the source loaded, then you will be prompted to attach the appropriate VM/SP source tape as your 181. Temporary disk space will be defined and the COPY and MACRO files will be loaded to that disk.

When the update is completed, the accessed source disks will be released (not detached) except for the temporary disk containing the source.

Update and Assemble Source Code

```
┌─────────────────────────────────────────────────────────────────────────────┐
│                                                                             │
│   100$CSA               UPDATE AND ASSEMBLE SOURCE CODE                      │
│   --------------------------------------------------------------------------│
│                                                                             │
│                                                                             │
│   Type in the required data and press ENTER.                                │
│                                                                             │
│                                                                             │
│           Filename:              _____      Enter the filename of the   │
│                                                 file to be assembled.       │
│                                                                             │
│           Control Filename:      _____      Enter the filename of the control │
│                                                 file that provides the proper │
│                                                 updating sequence for the   │
│                                                 assemble file.              │
│                                                                             │
│                                                                             │
│                                                                             │
│                                                                             │
│   --------------------------------------------------------------------------│
│   PF: 1  Help      2  Rdrlist   3  End       4  Return    5  Cmd     6  Index │
│   PF: 7  ...       8  ...       9  Probrep  10  ...      11  ...     12 Cursor │
│                                                                             │
│   ===>                                                                       │
│                                                                             │
└─────────────────────────────────────────────────────────────────────────────┘
```
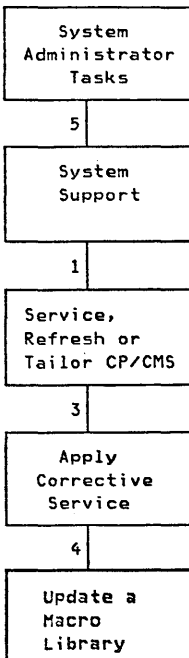
Figure 14. Update and Assemble Source Code.

```
┌──────────────┐
│   System     │
│Administrator │
│   Tasks      │
└──────┬───────┘
       │5
┌──────┴───────┐
│   System     │
│   Support    │
└──────┬───────┘
       │1
┌──────┴───────┐
│  Service,    │
│  Refresh or  │
│ Tailor CP/CMS│
└──────┬───────┘
       │3
┌──────┴───────┐
│   Apply      │
│  Corrective  │
│   Service    │
└──────┬───────┘
       │5
┌──────┴───────┐
│  Update and  │
│  Assemble    │
│  Source Code │
└──────────────┘
```
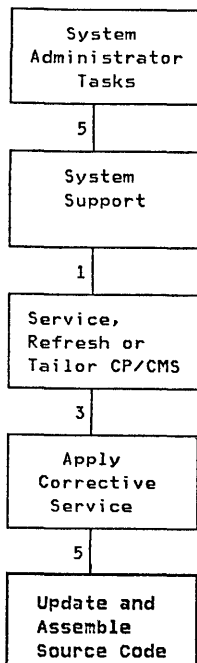
Whenever you apply an APAR fix to your system or use a ZAP to fix a problem with your system, the assemble source code must be updated to meet these changes.

When you select option 5 on the panel in Figure 12 on page 74, you will see the panel shown above. This panel asks you for the following information:

Filename

This is the name of the assemble file you want to use. The name must be at least one and no more than eight characters long.

Control filename

This is the name of the control file that contains a list of update files or auxiliary control files to be updated.

The VMFASM exec is specifically designed to assemble source code. It executes the CMS UPDATE command.

The following disks (if available) will be accessed in this order:

294 194 394 293 190 393

If the filename you specified is not found, the dialog checks to see if the filename begins with **DMK** (CP source files) or **DMS** (CMS source files). If so, you will be asked whether or not you want to have the source loaded to a temporary disk. If

you want to have the source loaded, then you will be prompted to attach the appropriate VM/SP source tape as your 181. Temporary disk space will be defined and the ASSEMBLE source file will be loaded to that disk.

When each file is completely assembled, the disks will be released (not detached) except for the temporary disk that contains the source code.

Explain How to Tailor Your System

Another option you can use to service, refresh, or tailor CP and CMS is to tailor your system. When you select option 4 on the panel in Figure 7 on page 62, you will see the panel shown below. Note, that the panels dealing with tailoring your system are merely explanations of how to do the tailoring.

```
┌─────────────────────────────────────────────────────────────────────────────────┐
│                                                                                   │
│    100$ST                          TAILOR YOUR SYSTEM                             │
│  --------------------------------------------------------------------------------- │
│                                                                                   │
│                                                                                   │
│         Select an explanation of how to tailor your:                             │
│                                                                                   │
│                                                                                   │
│                  1   System Definition file. (DMKSYS)                            │
│                                                                                   │
│                  2   Real I/O format. (DMKRIO)                                   │
│                                                                                   │
│                                                                                   │
│                                                                                   │
│                                                                                   │
│                                                                                   │
│  --------------------------------------------------------------------------------- │
│    PF: 1   Help      2   Rdrlist  3   End       4   Return   5   Cmd      6   Index │
│    PF: 7   ...       8   ...      9   Probrep  10   ...     11   ...     12   Cursor│
│                                                                                   │
│    ===>  _                                                                        │
└─────────────────────────────────────────────────────────────────────────────────┘
```

Figure 15. Tailor Your System.

```
┌─────────────────┐
│     System      │
│  Administrator  │
│     Tasks       │
└─────────────────┘
        │5
┌─────────────────┐
│     System      │
│    Support      │
└─────────────────┘
        │1
┌─────────────────┐
│   Service,      │
│   Refresh or    │
│  Tailor CP/CMS  │
└─────────────────┘
        │4
┌─────────────────┐
│    Tailor       │
│    Your         │
│    System       │
└─────────────────┘
```
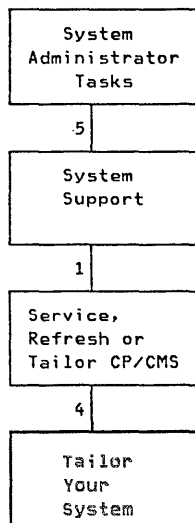
System tailoring helps add I/O devices, update the time reference, and build and load a CP nucleus. When you select option 1 or 2 and press the ENTER key, you will see several panels **explaining** how to tailor your system. Refer to these explain panels for information about how to tailor your system.

For more information on tailoring procedures as defined in VM/IPF, refer to:

> *VM/SP Planning and System Generation Guide* (if using VM/SP release 2)
> *VM/SP Planning Guide and Reference* (if using VM/SP release 3)
> *VM/SP Installation Guide* (if using VM/SP release 3).

Service Program Products (other than CP and CMS)

Service Program Products

```
┌─────────────────────────────────────────────────────────────────────────────────
│
│   100$52                       SERVICE PROGRAM PRODUCTS
│   -------------------------------------------------------------------------------
│   Type in the required data and press ENTER.
│
│          Real tape address:  ___
│
│   (Type an "X" next to Yes or No.)
│        _ Yes   X No     Do you want to print the Memos to Users.
│                         If you specify yes, no service will be applied.
│
│   The real tape address is the address of the tape drive containing the VM/PUT
│   tape.  If you chose to apply product service, type in the real address,
│   select no to print the memos, and then press the ENTER key. You will be
│   presented with a list of products you can apply service to.  Type any single
│   character next to any product you want to service, press the ENTER key
│   and then press the PF3 key.
│
│   Note:  You can only service program products supported by IPF release 4.
│
│   -------------------------------------------------------------------------------
│   PF: 1  Help     2  Rdrlist  3  End      4  Return    5  Cmd      6  Index
│   PF: 7  ...      8  ...      9  Probrep  10 ...       11 ...      12 Cursor
│
│   ===>
│
└─────────────────────────────────────────────────────────────────────────────────
```

Figure 16. Service Program Products.

```
┌──────────────┐
│   System     │
│Administrator │
│   Tasks      │
└──────┬───────┘
     5 │
┌──────┴───────┐
│   System     │
│   Support    │
└──────┬───────┘
     2 │
┌──────┴───────┐
│   Service    │
│   Program    │
│   Products   │
└──────────────┘
```
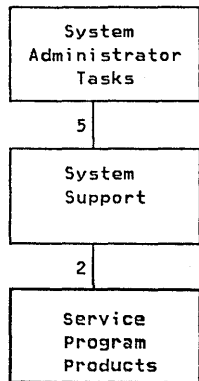
You can apply service to program products other than CP and CMS, using the panel in Figure 16. There are no other panels used when servicing program products; however, you may be prompted by the system to enter certain commands to enable the service to be applied correctly.

Note: If you want to use the system default on the panel, then simply press the ENTER key. If you do not want to use the system default, make sure you enter a blank in the default area. If you type an X in both fields, you will receive an error message from the system.

This panel asks you for the:

Real tape address

This is the **real** address where you have the PUT tape mounted. The system uses this address to find the tape you want to use. Addresses must be *exactly* three characters long and in hexadecimal form.

The real address you specified will be attached as virtual address 181. If another tape is attached to the MAINT userid as virtual 181, then that tape will be detached so that the read address you enter on the panel can be attached as your 181.

Do the following:

1. Get a printout of the Memos to Users (**No** service applied).

   To do this:

   a. Type in the real tape address.

   b. Type an X next to **Yes** for: Do you want to print the Memos to Users?

   c. Press the ENTER key.

      The Memos to Users will be printed, no service will be applied, and you will exit from this panel.

2. Apply a service update.

   To do this:

   a. Type in the real tape address.

   b. Type an X next to **No** for: Do you want to print the Memos to Users?

   c. Press the ENTER key.

      The Memos to Users will not be printed. You will be presented with a list of products you can apply service to.

      The product(s) on tape that you selected will be updated and you will exit from this panel.

EP/VS Product Tailoring

```
 _____
|     System        |
| Administrator     |
|     Tasks         |
|_____|
       5 |
 _____
|     System        |
|     Support       |
|_____|
       3 |
 _____
|     EP/VS         |
|     Product       |
|   Tailoring       |
|_____|
```
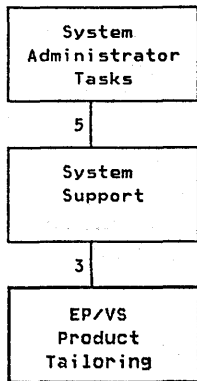
Emulation programs are control programs that manage the operations of the 3705 and 3704 Communications Controller. These controllers control the transmission of data over lines in a network. The emulation programs allow a given computer system to execute programs written for another controller. In particular, the EP/VS control program permits the 3705 or 3704 to emulate the function of a 2701 Data Adapter Unit, a 2702 Transmission Control Unit, or a 2703 Transmission Control Unit.

The EP/VS product must be installed permanently or temporarily. You may install the EP/VS product temporarily only if it has not already been permanently installed on your system.

If you wish to install the EP/VS product permanently, you must do this outside IPF. If you wish to install the EP/VS product temporarily, the EP/VS Generation dialog in IPF will aid you. You must only mount the EP/VS product tape on a disk drive that is attached as virtual address 181. Once you specify this real tape address (on the Generate EP/VS panel), the EP/VS generation procedure will automatically define a 335 temporary disk and install the product on it.

Your 335 T disk will be formatted, so you will lose all your files. The temporary disk will be detached when the procedure is complete.

The main menu panel **EP/VS Product Tailoring** gives you four options. The following is a brief description of what you can do with these options. Remember, the panels dealing with EP/VS are not shown in this book. The four options are:

1. Define EP/VS

   This option prompts you for data about the hardware of a communications network that the EP/VS control program will access. Things such as the controller model, the number of adapters and so forth. This data is used to build macros which are placed into an assembler file with the filetype of ASM3705.

2. Create and Modify EP/VS

   This option lets you both change the input to the EP/VS generation procedure, and look at the output from this process.

   To make the generation process easier, you are not required to enter all the data needed to create the ASM3705 file which is used as input to the EP/VS generation. This type of data is put into the file automatically, based on assumptions. (Like system defaults.)

   You should choose the Create and Modify option immediately after completing the Define EP/VS function. Thus you can review and, if necessary, change the ASM3705 file.

3. Generate EP/VS

   This option generates the EP/VS control program by doing a two-stage process. First, the macros in the ASM3705 file are assembled. Second, a load module of the EP/VS control program is produced.

4. Save EP/VS

Once the Generate EP/VS function is complete you must do this option. This option issues the SAVENCP command automatically for you. The command reads the EP/VS control program, and loads it into virtual storage.

If, in the Define EP/VS option, you specified a name other than NCPLIB for the Load Module Library name, then the Save EP/VS option should not be used. In this case, you must issue the SAVENCP commmand **after** exiting from IPF.

For each of these four options you should refer to any help panels which accompany the EP/VS Product Tailoring menu panel. In addition, refer to the following manuals:

IBM 3704 and 3705 Communications Controllers Principles of Operation
IBM 3704 and 3705 Control Program Generation and Utilities Guide and Reference Manual
VM/SP Planning and System Generation Guide (if using VM/SP release 2)
VM/SP Installation Guide (if using VM/SP release 3).

System Profile

```
 ┌──────────────┐
 │   System     │
 │Administrator │
 │   Tasks      │
 └──────────────┘
       5 │
 ┌──────────────┐
 │   System     │
 │   Support    │
 │              │
 └──────────────┘
       4 │
    Review
    System
    Profile
```
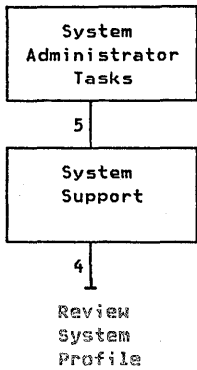
Each time a supported program product is installed, refreshed, or verified automatically, then the PROD LEVEL file is updated with an entry indicating the activity performed. However, since IPF release 5 does not carry out the program product install, refresh, or verify functions (as in previous releases), IPF release 5 does **not** add any updates to this PROD LEVEL file.

The PROD LEVEL file is on MAINT 319 (the P disk). This file shows: the activity performed (install, refresh, or verify), the date and time the change was made, and which supported product was affected. To browse your system profile, select option 4 on the panel in Figure 6 on page 60. The following is a sample of what a system profile might look like.

```
*------------------------------------------------------------------------
*5746AM2 - VSAM/AMS
REL 02.0 PUT 8205 09/23/82 20:38:27
*                                    INSTALLATION --- VERIFICATION
*                                    GOOD          NOT RUN   ***
*------------------------------------------------------------------------
* 5748XX9-DOCUMENT COMPOSITION FACILITY - SCRIPTVX (DCF)
REL 2.0 PTF NONE  11/08/82 16:44:34   MAINT
*                                    INSTALLATION --- VERIFICATION
*                                    GOOD          GOOD      ***
```

In the above sample, both VSAM/AMS (Rel 2.0) and DCF (Rel 2.0) were installed. However, there was **not** an automatic verification run on VSAM/AMS. This is because not all program products are verified automatically.

Restore Discontiguous Shared Segments

```
100$36              RESTORE A DISCONTIGUOUS SHARED SEGMENT
--------------------------------------------------------------------------------


   Type in the required data and press ENTER.


       Filename:               _____        Enter the filename of the
                                                discontiguous shared segment.

           The file you specify must have a filetype of DCSSBKUP.  In
           addition, the discontiguous shared segment must have been
           previously backed up by the DCSSBKUP module.

  Note - To be able to store a segment, your virtual storage must be
         greater than the location of the segment where it is loaded.
         This storage value can only be determined by looking at
         DMKSNT and calculating how big virtual storage must be.

  --------------------------------------------------------------------------------
  PF: 1  Help     2  Rdrlist   3  End        4  Return   5  Cmd      6  Index
  PF: 7  ...      8  ...       9  Probrep    10 ...       11 ...      12 Cursor

  ===>
```

Figure 17. Restore Discontiguous Shared Segments.

```
┌─────────────────┐
│     System      │
│  Administrator  │
│     Tasks       │
└─────────────────┘
   5 │
┌─────────────────┐
│     System      │
│     Support     │
└─────────────────┘
   6 │
┌─────────────────┐
│    Restore      │
│  Discontiguous  │
│ Shared Segment  │
└─────────────────┘
```
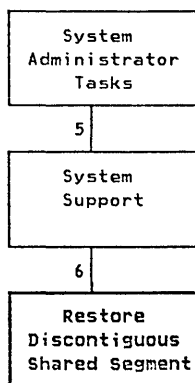
System Management may store CMS files containing the Shared Segments in this or any other system. When you select option 6 on the panel in Figure 6 on page 60 and press the ENTER key, you will see the panel shown above. You can use this panel to restore discontiguous shared segments. The panel asks you for the:

Filename

This is the filename of the discontiguous shared segment you want to restore. The segment you specify must have a filetype of DCSSBKUP or you will get an error message from the system.

The module DCSSBKUP creates a CMS file of a previously built (saved) discontiguous saved segment. DCSSBKUP will not work if the segment does not already exist. (The file * DCSSBKUP must be found in order for the function DCSSRSAV to create the saved files).

Syntax is obtained by typing:

DCSSBKUP ?

For more information on the use of DCSSBKUP you can do any of the following:

1. Refer to "DCSSBKUP" on page 184.

2. Link to the 3A0 disk and xedit the file called: IPF DTRREF.

3. Use the End User dialog of VM/IPF to get online information. Online information is an option on a panel titled: User Assistance. The document you would refer to is called "IPF Module/EXEC Guide."

To use this function you must first have an Mdisk available containing your CMS Shared Segments files. The files may be on any Mdisk; but, it is recommended that you use a separate Mdisk for this purpose.

To be able to restore save shared segments, your virtual storage must be greater than the location of the segment where it is loaded. To check how much storage you have, enter the following command:

```
Q V STOR
```

Chapter 5. RSCS (Remote Spooling Communications Subsystem)

What Is RSCS?

RSCS (Remote Spooling Communications Subsystem) is a tool you use to communicate with other computer systems. If you have RSCS[3] installed on your system, you can use the panels in this chapter to add or delete links and routes, start or stop links, and so forth.

Before you use the panels in this chapter, you should be familiar with the concept of networking. If inexperienced people try to use these panels, they could inadvertently cause a lot of damage to your RSCS network. The purpose of this chapter and these panels *is not* to teach people how to use RSCS. Their purpose is to make RSCS easier to use for those people who are already familiar with RSCS. *If you do not know anything about RSCS or the concept of networking, it is strongly recommended that you do not use these panels.* If you need more detail on any of the sections in this chapter, see the appropriate sections of the *VM/SP Remote Spooling Communications Subsystem Networking Program Reference and Operations Manual.*

Note: To use the panels in this chapter, you must be logged on under the userid "MAINT." Also, you should have a R/W link to the RSCS 191 minidisk as 202.

---

[3]   RSCS/N Release 3.0 Program Product (5748-XP1)

Add a Link to the RSCS Directory

Link to a VM System Using BSC

```
┌─────────────────────────────────────────────────────────────────────────────┐
│  RSC$31A                 LINK TO A VM SYSTEM USING BSC                         │
│  ---------------------------------------------------------------------------  │
│                                                                               │
│          Type the appropriate information below.                              │
│                                                                               │
│                                 The linkid:   _____                        │
│                                 The address:  __                              │
│                                                                               │
│          Optional:                                                            │
│                                                                               │
│                      The transmitted password:      _____                 │
│                      The received password:         _____                 │
│                      The buffer size ( 824 - 4072 ): 824_                     │
│                      The task name:                 ____                      │
│                                                                               │
│               Do you want to send virtual 3800 files on this link?            │
│                            _ Yes            _ No                               │
│                                                                               │
│  ---------------------------------------------------------------------------  │
│  PF: 1  Help      2  Rdrlist  3  End      4  Return   5  Cmd      6  Index     │
│  PF: 7  ...       8  ...      9  Probrep  10 ...       11 ...      12 Cursor   │
│                                                                               │
│  ===>                                                                         │
└─────────────────────────────────────────────────────────────────────────────┘
```

Figure 18. Link to a VM System Using BSC

```
┌──────────────────┐
│     System       │
│  Administrator   │
│     Tasks        │
└──────────────────┘
         4│
┌──────────────────┐
│     Manage       │
│     RSCS         │
└──────────────────┘
         2│
┌──────────────────┐
│     Change       │
│     RSCS         │
│     System       │
└──────────────────┘
         1│
┌──────────────────┐
│    Add Link      │
│    or Route      │
│  to Directory    │
└──────────────────┘
         1│
┌──────────────────┐
│    Add Link      │
│    to RSCS       │
│   Directory      │
└──────────────────┘
         1│
┌──────────────────┐
│   Link to VM     │
│    System        │
│   Using BSC      │
└──────────────────┘
```
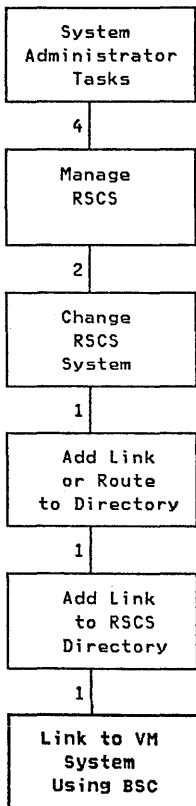
The panel in Figure 18 lets you link to another VM system. There are two ways you can link to a VM system:

1. **Using BSC (Binary Synchronous Communication)** - BSC is a method of communicating with another computer system. It uses a standardized set of control characters and control character sequences to synchronously transmit binary-coded information.

2. Using CTCA (Channel-To-Channel Adaptor) - This method is discussed in "Link to a VM System Using CTCA" on page 93.

This panel asks you for the following:

The linkid

This is the "name" of the link.

Acceptable Linkids	Unacceptable Linkids
LINKONE	LINK ONE
SYSTEM5	SYSTEMFIVE
SYS4	LINK TO 4

A linkid must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ # @ + - :

The address

This is the virtual address of the communications line port. Addresses must be *exactly* three characters long and in hexadecimal form.

The fields described below are all optional.

The transmitted password

This password must be transmitted during the sign-on sequence. If you leave the field blank, this password will be the same as the received password. The system will do this by default.

Acceptable Passwords	Unacceptable Passwords
TP$ABC	TRANSMITTED
BSC-PASS	BSC PASS

The password must be at least one, but no more than eight, characters long. You cannot use blanks. The only special characters you can use are:

$ # @ + - :

The received password

This password must be received from the other system before file transfer is initiated. If you leave the field blank, this password will be the same as the transmitted password. The system will do this by default.

This password must follow the rules described above (under **The transmitted password**).

The buffer size

This is the largest number of characters per buffer that you can use on this link. The buffer size can be any number between 824 and 4072. The default is **824**.

The task name

This is a unique identifier that RSCS requires for its own internal line driver usage. Task names must be at least one, but not more than four, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ #   @   +   -   :

If you leave this field blank, the system will use the first four characters of the linkid. If some other task name is already using these four characters, you will get a message from the system telling you to change the task name.

Do you want to send virtual 3800 files on this link?

If you type an X in the **Yes** field, your users can send virtual 3800 files to another system. If you type an X in the **No** field, they cannot.

```
┌─────────────────────────────────────────────────────────────────────────────────
│
│    RSC$31G                    LINK TO A VM SYSTEM USING CTCA
│    ----------------------------------------------------------------------------
│
│
│             Type the appropriate information below.
│
│                               The linkid:  _____
│                               The address: ___
│
│
│             Optional:
│
│                               The task name: ____
│
│                  Do you want to send virtual 3800 files on this link?
│                           _ Yes             _ No
│
│
│    ----------------------------------------------------------------------------
│    PF: 1  Help      2  Rdrlist  3  End        4  Return    5  Cmd      6  Index
│    PF: 7  ...       8  ...      9  Probrep   10  ...       11  ...     12  Cursor
│
│    ===>
│
└─────────────────────────────────────────────────────────────────────────────────
```
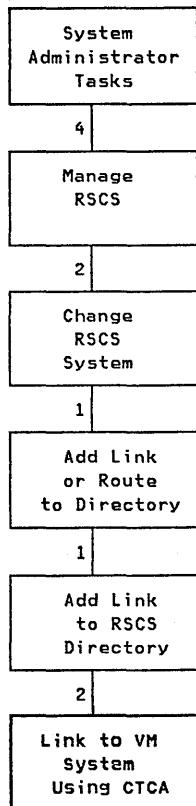
Figure 19. Link to a VM System Using CTCA

```
┌──────────────────┐
│     System       │
│  Administrator   │
│     Tasks        │
└──────────────────┘
        4│
┌──────────────────┐
│     Manage       │
│     RSCS         │
└──────────────────┘
        2│
┌──────────────────┐
│     Change       │
│     RSCS         │
│     System       │
└──────────────────┘
        1│
┌──────────────────┐
│    Add Link      │
│    or Route      │
│  to Directory    │
└──────────────────┘
        1│
┌──────────────────┐
│    Add Link      │
│    to RSCS       │
│   Directory      │
└──────────────────┘
        2│
┌──────────────────┐
│   Link to VM     │
│    System        │
│   Using CTCA     │
└──────────────────┘
```

The panel in Figure 19 lets you link to another VM system. There are two ways you can link to a VM system:

1. Using BSC (Binary Synchronous Communication) - This method is discussed in "Link to a VM System Using BSC" on page 90.

2. **Using CTCA (Channel-To-Channel Adaptor)** - CTCA is a hardware device that connects two channels. A channel is what you use to send and receive information to and from another computer system.

This panel asks you for the following:

The linkid

This is the "name" of the link.

Acceptable Linkid	Unacceptable Linkids
LINKONE	LINK ONE
SYSTEM5	SYSTEMFIVE
SYS4	LINK TO 4

A linkid must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ #   @   +   -   :

The address

This is the virtual address of the communications line port. Addresses must be *exactly* three characters long and in hexadecimal form.

The fields described below are all optional.

The task name

This is a unique identifier that RSCS requires for its own internal line driver usage. Task names must be at least one, but not more than four, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ # @ + - :

If you leave this field blank, the system will use the first four characters of the linkid. If some other task name is already using these four characters, you will get a message from the system telling you to change the task name.

Do you want to send virtual 3800 files on this link?

If you type an X in the **Yes** field, your users can send virtual 3800 files to another system. If you type an X in the **No** field, they cannot.

```
RSC$31B              LINK TO AN MVS SYSTEM OR VSE/POWER VERSION 2
------------------------------------------------------------------------------
                  Type the appropriate information below.

                               The linkid:    _____
                               The address:   ___

                  Optional:
                          The remote line password:       _____
                          The remote node password:       _____
                          The transmitted line password:  _____
                          The transmitted node password:  _____

                          The partial nodal resistance (2-2000): 200_
                          The buffer size (300-3976):             400_
                          The task name:                          ____

                  Do you want to send virtual 3800 files on this link?
                                     _ Yes          _ No
------------------------------------------------------------------------------
      PF: 1  Help      2  Rdrlist   3  End       4  Return    5  Cmd      6  Index
      PF: 7  ...       8  ...       9  Probrep  10  ...      11  ...     12  Cursor

      ===>
```
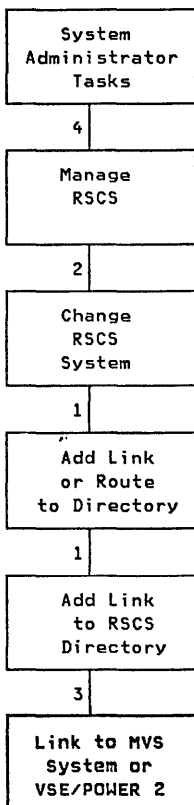
Figure 20. Link to a MVS System Or VSE/POWER Version 2

The panel in Figure 20 lets you link to either an MVS system or a VSE/POWER (version 2) system. This panel asks you for the following:

The linkid

This is the "name" of the link.

Acceptable Linkids	Unacceptable Linkids
LINKONE	LINK ONE
SYSTEM5	SYSTEMFIVE
SYS4	LINK TO 4

A linkid must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ #   @   +   -   :

The address

This is the virtual address of the communications line port. Addresses must be *exactly* three characters long and in hexadecimal form.

```
┌──────────────────┐
│     System       │
│  Administrator   │
│      Tasks       │
└──────────────────┘
        4│
┌──────────────────┐
│     Manage       │
│      RSCS        │
└──────────────────┘
        2│
┌──────────────────┐
│     Change       │
│      RSCS        │
│     System       │
└──────────────────┘
        1│
┌──────────────────┐
│    Add Link      │
│   or Route       │
│  to Directory    │
└──────────────────┘
        1│
┌──────────────────┐
│    Add Link      │
│    to RSCS       │
│   Directory      │
└──────────────────┘
        3│
┌──────────────────┐
│  Link to MVS     │
│  System or       │
│  VSE/POWER 2     │
└──────────────────┘
```

The fields described below are all optional.

The remote line password

This is the line password required from the remote system before the transmission of data is initiated. If the correct password is not received at line connection time, RSCS deactivates the link.

Acceptable Passwords	Unacceptable Passwords
RLP$ABC	REMOTE LINE
MVS-PASS	MVS PASS
VSE-PASS	VSE TWO

The password must be at least one, but no more than eight, characters long. You cannot use blanks. The only special characters you can use are:

$ #   @   +   -   :

The remote node password

This is the node password required from the remote system before the transmission of data is initiated. If the correct password is not received at line connection time, RSCS deactivates the link.

This password must follow the rules described above (under **The remote line password**).

The transmitted line password

This is the line password to be transmitted to the remote system at line connection time. This password must follow the rules described above (under **The remote line password**).

The transmitted node password

This is the node password to be transmitted to the remote system at line connection time. This password must follow the rules described above (under **The remote line password**).

The partial nodal resistance

This is the MVS version of the VM/SP priority command. It is used to indicate the priority of the information you are transmitting. You can use any number between 2 and 2000. The default is **200**.

The buffer size

This is the largest number of characters per buffer that you can use on this link. The buffer size can be any number between 300 and 3976. The default is **400**.

The task name

This is a unique identifier that RSCS requires for its own internal line driver usage. Task names must be at least one, but not more than four, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$\quad$ # $\quad$ @ $\quad$ + $\quad$ - $\quad$:

If you leave this field blank, the system will use the first four characters of the linkid. If some other task name is already using these four characters, you will get a message from the system telling you to change the task name.

Do you want to send virtual 3800 files on this link?

If you type an X in the **Yes** field, your users can send virtual 3800 files to another system. If you type an X in the **No** field, they cannot.

```
┌─────────────────────────────────────────────────────────────────────────────┐
│                                                                               │
│  RSC$31F                    LINK TO A VSE/POWER VERSION 1                      │
│  ---------------------------------------------------------------------------- │
│                                                                               │
│                                                                               │
│             Type the appropriate information below.                           │
│                                                                               │
│                             The linkid:   _____                            │
│                             The address:  ___                                 │
│                                                                               │
│                                                                               │
│             Optional:                                                         │
│                                                                               │
│                                                                               │
│                             The task name:  ____                              │
│                             The password:   _____                            │
│                             The remote CPUID number (1-200):  ___             │
│                                                                               │
│                                                                               │
│                                                                               │
│  ---------------------------------------------------------------------------- │
│  PF: 1  Help      2  Rdrlist   3  End       4  Return    5  Cmd      6  Index  │
│  PF: 7  ...       8  ...       9  Probrep  10  ...      11  ...     12  Cursor │
│                                                                               │
│  ===>                                                                         │
│                                                                               │
└─────────────────────────────────────────────────────────────────────────────┘
```
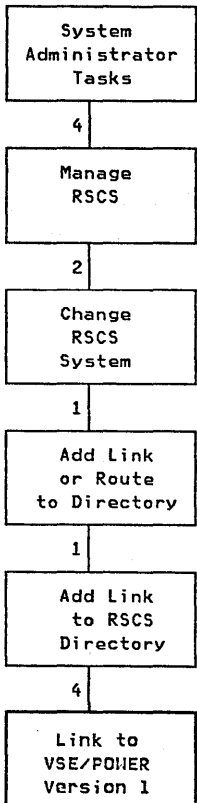
Figure 21. Link to a VSE/POWER Version 1

```
┌──────────────────┐
│     System       │
│ Administrator    │
│     Tasks        │
└────────┬─────────┘
       4 │
┌────────┴─────────┐
│    Manage        │
│     RSCS         │
└────────┬─────────┘
       2 │
┌────────┴─────────┐
│    Change        │
│     RSCS         │
│    System        │
└────────┬─────────┘
       1 │
┌────────┴─────────┐
│   Add Link       │
│   or Route       │
│  to Directory    │
└────────┬─────────┘
       1 │
┌────────┴─────────┐
│   Add Link       │
│   to RSCS        │
│   Directory      │
└────────┬─────────┘
       4 │
┌────────┴─────────┐
│    Link to       │
│  VSE/POWER       │
│  Version 1       │
└──────────────────┘
```

The panel in Figure 21 lets you link to a VSE/POWER (version 1) system. This panel asks you for the following:

The linkid

This is the "name" of the link.

Acceptable Linkids	Unacceptable Linkids
LINKONE	LINK ONE
SYSTEM5	SYSTEMFIVE
SYS4	LINK TO 4

A linkid must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ #   @   +   -   :

The address

This is the virtual address of the communications line port. Addresses must be *exactly* three characters long and in hexadecimal form.

The fields described below are all optional.

The task name

This is a unique identifier that RSCS requires for its own internal line driver usage. Task names must be at least one, but not more than four, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ #   @   +   -   :

If you leave this field blank, the system will use the first four characters of the linkid. If some other task name is already using these four characters, you will get a message from the system telling you to change the task name.

The password

This password must be supplied by the VSE/POWER operator during the sign-on procedure. The remote VSE/POWER system must supply this password in its PSTART RJE command in order to connect to RSCS. If you leave this field blank, no password is required at sign-on.

Acceptable Passwords	Unacceptable Passwords
P$ABC	THEPASSWORD
VSE-PASS	VSE PASS
VSE+ONE	VSE ONE

The password must be at least one, but no more than eight, characters long. You cannot use blanks. The only special characters you can use are:

$ #   @   +   -   :

The remote CPUID number

This number is the global remote ID of the remote VSE/POWER system. You can type any number between 1 and 200. If you leave this field blank, the default is 001.

```
 RSC$31C          LINK TO A 3270 INFORMATION DISPLAY SYSTEM PRINTER
 ------------------------------------------------------------------------
        Type the appropriate information below.
                              The linkid: _____
                              The address: ___

      -------------- ( Everything below this point is optional. ) --------------

              Lines per page (0-99): 66          The task name: ____

        Type an X before anything you want below.
                        _  VFC         _  NOCOMP      _  XNL
                        _  NOSEP       _  NOOVP

        (You can only choose one from each of the three sections below.)

      Printer Equipment                   Buffer Size            Print positions
      _  DA-APL      _  AT-APL       _  480    _  1920   _  3440    _  120   _  132
      _  DA-TEXT     _  AT-TEXT      _  960    _  2560   _  3564    _  126
 ------------------------------------------------------------------------
 PF:  1   Help      2  Rdrlist   3  End       4  Return      5  Cmd       6   Index
 PF:  7   ...       8  ...       9  Probrep  10  ...        11  ...      12   Cursor

 ===>
```

Figure 22. Link to a 3270 Information Display System Printer

```
┌─────────────────┐
│     System      │
│  Administrator  │
│      Tasks      │
└────────┬────────┘
      4  │
┌────────┴────────┐
│     Manage      │
│      RSCS       │
└────────┬────────┘
      2  │
┌────────┴────────┐
│     Change      │
│      RSCS       │
│     System      │
└────────┬────────┘
      1  │
┌────────┴────────┐
│    Add Link     │
│    or Route     │
│  to Directory   │
└────────┬────────┘
      1  │
┌────────┴────────┐
│    Add Link     │
│    to RSCS      │
│   Directory     │
└────────┬────────┘
      5  │
┌────────┴────────┐
│  Link to 3270   │
│    Display      │
│    Printer      │
└─────────────────┘
```
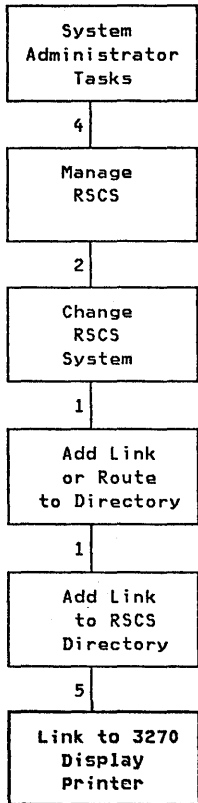
The panel in Figure 22 lets you link to a 3270 Information Display System Printer.

This panel asks you for the following:

The linkid

This is the "name" of the link.

Acceptable Linkids	Unacceptable Linkids
LINKONE	LINK ONE
SYSTEM5	SYSTEMFIVE
SYS4	LINK TO 4

A linkid must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ #   @   +   -   :

The address

This is the virtual address of the communications line port. Addresses must be *exactly* three characters long and in hexadecimal form.

The fields described below are all optional.

Lines per page

This is how many lines you want to print on each piece of paper. You must use a number between 0 and 99. The default is 66.

Note: If you type 0, the line driver will not use page ejects. Usually, when you print something, the printer will leave a couple of lines at the top (and bottom) of a page blank. When you use 0, the printer will not skip any lines. It will just keep printing and printing until there is nothing left to print.

The task name

This is a unique identifier that RSCS requires for its own internal line driver usage. Task names must be at least one, but not more than four, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$$ \$ \quad \# \quad @ \quad + \quad - \quad : $$

If you leave this field blank, the system will use the first four characters of the linkid. If some other task name is already using these four characters, you will get a message from the system telling you to change the task name.

VFC

If you type an X in this field, you are telling your system that the printer you are linking to has the vertical forms control feature.

NOCOMP

If you type an X in this field, you are telling the line driver not to perform blank compression. Use this for locally attached printers. The default is to compress occurrences of five or more blanks.

XNL

If you type an X in this field, you are telling the line driver to include an extra "NL" (New Line) order after every line that is equal to the maximum line length. You should use this when you have a printer that does not generate a new line for lines equal to the maximum line length.

NOSEP

If you type an X in this field, the printer will not separate each file with a header and separation page. The default is to separate each file.

NOOVP

If you type an X in this field, you are telling the printer not to overprint (for example, **bold print** in text). Use this when you have a printer that does not support the "CR" (Carriage Return) order.

Printer Equipment

This is the type of equipment that the printer supports.

DA-APL - if you type an X in this field, the printer is equipped with the Data Analysis-APL feature and all files containing internally represented EBCDIC special APL characters are to be translated to the appropriate two-byte I/O interface codes.

AT-APL - if you type an X in this field, the printer is equipped with the APL/Text feature and all files containing internally represented EBCDIC special APL characters are to be translated to the appropriate two-byte I/O interface codes.

DA-TEXT - if you type an X in this field, the printer is equipped with the Data Analysis-APL feature and all files containing internally represented EBCDIC special Text characters are to be translated to the appropriate two-byte I/O interface codes.

AT-TEXT - if you type an X in this field, the printer is equipped with the APL/Text feature and all files containing internally represented EBCDIC special Text characters are to be translated to the appropriate two-byte I/O interface codes.

Buffer Size

This is the largest number of characters per record that you can use on this link. You can choose any *one* of the following:

480	1920	3440
960	2560	3564

The default is **1920**.

Print positions

This is the largest number of characters you can use per line on this printer. You can only choose *one* of the following:

If You Have	Use
3262	132
3284	120, 126, or 132
3286	120, 126, or 132
3287	132
3288	132
3289	132

The default is **132**.

```
┌─────────────────────────────────────────────────────────────────────────────────┐
│                                                                                   │
│  RSC$31D                 LINK TO A NONPROGRAMMABLE TERMINAL                        │
│  ------------------------------------------------------------------------------   │
│                                                                                   │
│                                                                                   │
│                  Type the appropriate information below.                          │
│                                                                                   │
│                                                                                   │
│                         The linkid:      _____                                 │
│                         The address:     ___                                      │
│                                                                                   │
│                                                                                   │
│                  Optional:                                                        │
│                                                                                   │
│                         The password:    _____                                 │
│                         The task name:   ___                                      │
│                                                                                   │
│                                                                                   │
│                                                                                   │
│                                                                                   │
│  ------------------------------------------------------------------------------   │
│  PF: 1  Help     2  Rdrlist  3  End      4  Return   5  Cmd      6  Index          │
│  PF: 7  ...      8  ...      9  Probrep  10 ...       11 ...      12 Cursor        │
│                                                                                   │
│  ===>                                                                             │
│                                                                                   │
└─────────────────────────────────────────────────────────────────────────────────┘
```

Figure 23. Link to a Nonprogrammable Terminal

```
┌─────────────────┐
│     System      │
│  Administrator  │
│     Tasks       │
└────────┬────────┘
       4 │
┌────────┴────────┐
│     Manage      │
│     RSCS        │
└────────┬────────┘
       2 │
┌────────┴────────┐
│     Change      │
│     RSCS        │
│     System      │
└────────┬────────┘
       1 │
┌────────┴────────┐
│   Add Link      │
│   or Route      │
│  to Directory   │
└────────┬────────┘
       1 │
┌────────┴────────┐
│   Add Link      │
│   to RSCS       │
│   Directory     │
└────────┬────────┘
       6 │
┌────────┴────────┐
│    Link to      │
│ Nonprogrammable │
│   Terminal      │
└─────────────────┘
```
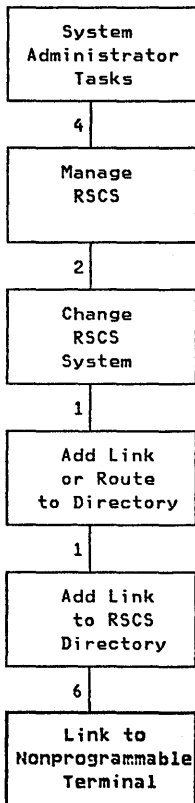
The panel in Figure 23 lets you link to a nonprogrammable terminal. This panel asks you for the following:

The linkid

This is the "name" of the link.

Acceptable Linkids	Unacceptable Linkids
LINKONE	LINK ONE
SYSTEM5	SYSTEMFIVE
SYS4	LINK TO 4

A linkid must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$$\$ \quad \# \quad @ \quad + \quad - \quad :$$

The address

This is the virtual address of the communications line port. Addresses must be *exactly* three characters long and in hexadecimal form.

The fields described below are all optional.

The password

This password must be supplied by the remote station to be allowed to connect to RSCS. If you leave this field blank, no password is required at sign-on time.

Acceptable Passwords	Unacceptable Passwords
P$ABC	THEPASSWORD
NPT-PASS	NPT PASS

The password must be at least one, but no more than eight, characters long. You cannot use blanks. The only special characters you can use are:

$ #   @   +   -   :

The task name

This is a unique identifier that RSCS requires for its own internal line driver usage. Task names must be at least one, but not more than four, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ #   @   +   -   :

If you leave this field blank, the system will use the first four characters of the linkid. If some other task name is already using these four characters, you will get a message from the system telling you to change the task name.

```
RSC$31E              LINK TO A PROGRAMMABLE REMOTE STATION
------------------------------------------------------------------------
          Type the appropriate information below.

                              The linkid:   _____
                              The address:  ___

          Optional:

                      The password:            _____
                      The task name:           _____
                      The buffer size (0-1017): 400_

          You can use only one of the following at a time:

                   __    For remote job entry into a HASP or JES2 system (Hrn).
                   __    For remote job entry into RES of the OS/VS1 system (Rrn).
                   ____  For remote job entry into an ASP or JES3 system (Arn).
                   __    For host to a remote programmable station (Mrn).
------------------------------------------------------------------------
          PF: 1  Help     2  Rdrlist  3  End      4  Return   5  Cmd     6  Index
          PF: 7  ...      8  ...      9  Probrep  10 ...       11 ...     12 Cursor

          ===>
```

Figure 24. Link to a Programmable Remote Station
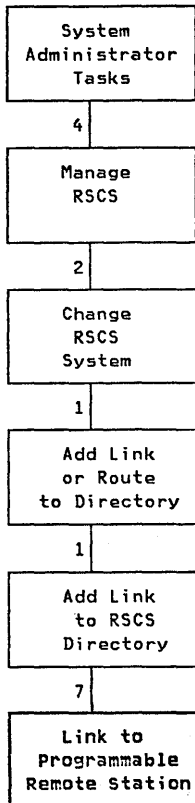
The panel in Figure 24 lets you link to a programmable remote station. This panel asks you for the following:

The linkid

This is the "name" of the link.

Acceptable Linkids	Unacceptable Linkids
LINKONE	LINK ONE
SYSTEM5	SYSTEMFIVE
SYS4	LINK TO 4

A linkid must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ # @ + - :

The address

This is the virtual address of the communications line port. Addresses must be *exactly* three characters long and in hexadecimal form.

The fields described below are all optional.

The password

This password is used by the line driver to validate the start of a terminal session.

Acceptable Passwords   **Unacceptable Passwords**

P$ABC   THEPASSWORD
SML-PASS   SML PASS

The password must be at least one, but no more than eight, characters long. You cannot use blanks. The only special characters you can use are:

$ #   @   +   -   :

The task name

This is a unique identifier that RSCS requires for its own internal line driver usage. Task names must be at least one, but not more than four, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ #   @   +   -   :

If you leave this field blank, the system will use the first four characters of the linkid. If some other task name is already using these four characters, you will get a message from the system telling you to change the task name.

The buffer size

This is the largest number of characters per buffer that you can use on this link. The buffer size can be any number between 0 and 1017. The default is **400**.

For remote job entry into a HASP or JES2 system

If you type a number between 0 and 99 in this field, the line driver will operate as a remote job entry system into a remote HASP or JES2 system as the remote number you type.

For remote job entry into RES of the OS/VS1 system

If you type a number between 0 and 99 in this field, the line driver will operate as a remote job entry station into the Remote Entry Subsystem (RES) of OS/VS1 as the remote number you type.

For remote job entry into an ASP or JES3 system

If you type a one- to five-character alphanumeric name in this field, the line driver will operate as a remote job entry system into a remote ASP or JES3 system as the remote name you type.

For host to a remote programmable station

If you type a number between 0 and 99 in this field, the line driver will operate as a host to a remote programmable station signing on as the remote number you type.

Delete a Link from the RSCS Directory

```
┌─────────────────────────────────────────────────────────────────────────────┐
│                                                                             │
│  RSC$321              DELETE A LINK FROM THE RSCS DIRECTORY                  │
│  ---------------------------------------------------------------------------│
│                                                                             │
│          Type the linkid of the link that you want deleted below.          │
│                                                                             │
│                       The linkid: _____                                  │
│                                                                             │
│                                                                             │
│                                                                             │
│          If you want to see all the available links before you             │
│      start, type an X below.                                                │
│                                                                             │
│                         _ Display links first?                             │
│                                                                             │
│                                                                             │
│          Warning - When you delete a link, the active file will            │
│                     finish processing, but all inactive files              │
│                     waiting on the queue will be lost.                      │
│                                                                             │
│  ---------------------------------------------------------------------------│
│  PF: 1  Help      2  Rdrlist  3  End       4  Return   5  Cmd    6  Index    │
│  PF: 7  ...       8  ...      9  Probrep  10  ...      11  ...   12  Cursor  │
│                                                                             │
│  ===>                                                                       │
│                                                                             │
└─────────────────────────────────────────────────────────────────────────────┘
```
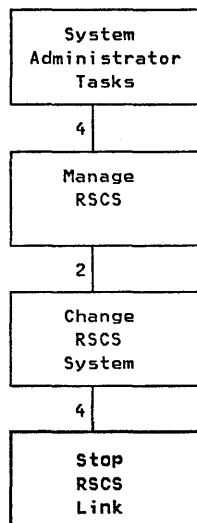
Figure 25. Delete a Link From the RSCS Directory

```
┌─────────────────┐
│     System      │
│  Administrator  │
│      Tasks      │
│─────────────────│
│  4              │
└─────────────────┘
         │
┌─────────────────┐
│     Manage      │
│      RSCS       │
│                 │
│─────────────────│
│  2              │
└─────────────────┘
         │
┌─────────────────┐
│     Change      │
│      RSCS       │
│     System      │
│─────────────────│
│  2              │
└─────────────────┘
         │
┌─────────────────┐
│   Delete Link   │
│  or Route from  │
│    Directory    │
│─────────────────│
│  1              │
└─────────────────┘
         │
┌─────────────────┐
│   Delete Link   │
│    from RSCS    │
│    Directory    │
└─────────────────┘
```
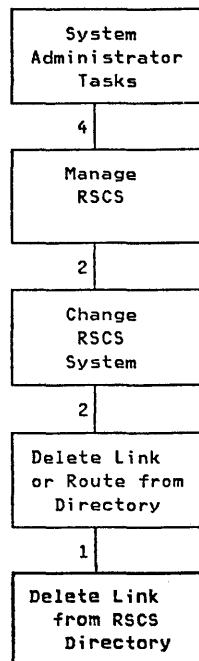
The panel in Figure 25 lets you delete (or "erase") one of the links in the RSCS directory. When you delete a link, all the routes you have defined using that link will also be deleted. Before you delete a link, it should be inactive and should have no files waiting in the queue.

To find out whether the link is active or inactive, type an X in the **Display links first** field. If the link is still active, use the panel in Figure 27 on page 111 to make it inactive. You will also get a message from the system telling you which links (if any) have files in the queue.

If there are files in the queue and you decide to delete the link anyway, the file that is being sent over the link (the "active" file) will get to its destination, but all the files that are waiting to be sent (the "inactive" files) will be lost.

This panel asks you for the following:

The linkid

This is the "name" of the link. A linkid must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ # @ + - :

Display links first?

Type an X in this field to see a list of all the links (active and inactive) you can choose from. If there are no files in the queue, you will see something like this:

```
DMTCMX670I LINK NYC CONNECT -- DMTVMB LINE 00A NOH NOD NOT
DMTCMX671I LINK BOSTON INACTIVE -- DEFAULT DMTVMB LINE 00B
DMTCMX670I LINK CHICAGO ACTIVE -- DMTVMB LINE 00C NOH NOD TRL
DMTCMX674I NO FILES QUEUED
```

Or, if there are files in the queue:

```
DMTCMX670I LINK NYC CONNECT -- DMTVMB LINE 00A NOH NOD NOT
DMTCMX671I LINK BOSTON INACTIVE -- DEFAULT DMTVMB LINE 00B
DMTCMX670I LINK CHICAGO ACTIVE -- DMTVMB LINE 00C NOH NOD TRL
DMTCMX654I LINK NYC S=0 R=0 Q=1 P=0
```

Start an RSCS Link

```
RSC$331                        START AN RSCS LINK
------------------------------------------------------------------------------

              Type the linkid of the link that you want to start below.


                         The linkid: _____



              If you want to see all of the available links before you
          start, type an X below.


                         _ Display links first?



------------------------------------------------------------------------------
PF: 1  Help      2  Rdrlist  3  End        4  Return    5  Cmd      6  Index
PF: 7  ...       8  ...      9  Probrep   10  ...       11 ...      12 Cursor

===>
```
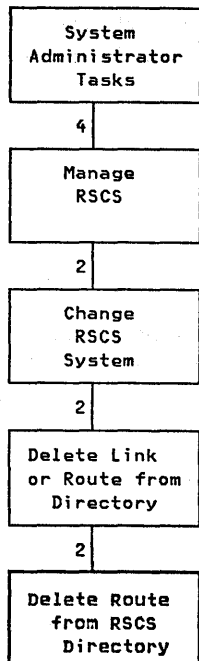
Figure 26. Start an RSCS Link

```
System
Administrator
Tasks

  4

Manage
RSCS

  2

Change
RSCS
System

  3

Start
RSCS
Link
```
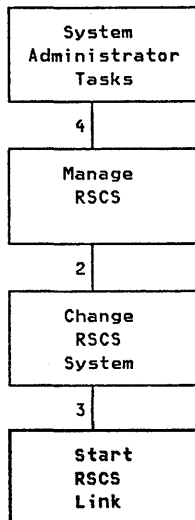
The panel in Figure 26 lets you start a link. You will use this when you have an inactive link that you want to make active. Once the link becomes active, you can send information (files, messages, and so forth) to the remote system. A link becomes inactive when you use the panel in Figure 27 on page 111.

This panel asks you for the following:

The linkid

This is the "name" of the link. A linkid must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ #   @   +   -   :

Display links first?

Type an X in this field to see a list of all the links (active and inactive) you can choose from. If there are no files in the queue, you will see something like this:

```
DMTCMX670I LINK NYC CONNECT -- DMTVMB LINE AOA NOH NOD NOT
DMTCMX671I LINK BOSTON INACTIVE -- DEFAULT DMTVMB LINE BOB
DMTCMX670I LINK CHICAGO ACTIVE -- DMTVMB LINE COC NOH NOD TRL
DMTCMX674I NO FILES QUEUED
```

Or, if there are files in the queue:

```
DMTCMX670I LINK NYC CONNECT -- DMTVMB LINE AOA NOH NOD NOT
DMTCMX671I LINK BOSTON INACTIVE -- DEFAULT DMTVMB LINE BOB
DMTCMX670I LINK CHICAGO ACTIVE -- DMTVMB LINE COC NOH NOD TRL
DMTCMX654I LINK NYC S=0 R=0 Q=1 P=0
```

Stop an RSCS Link

```
┌─────────────────────────────────────────────────────────────────────────────┐
│                                                                               │
│  RSC$332                          STOP AN RSCS LINK                           │
│  -----------------------------------------------------------------------------│
│                                                                               │
│                                                                               │
│            Type the linkid of the link that you want stopped below.           │
│                                                                               │
│                                                                               │
│                       The linkid:  _____                                   │
│                                                                               │
│                                                                               │
│                                                                               │
│            If you want to see all of the available links before you           │
│        start, type an X below.                                                │
│                                                                               │
│                                                                               │
│                       _ Display links first?                                  │
│                                                                               │
│                                                                               │
│                                                                               │
│  -----------------------------------------------------------------------------│
│  PF: 1  Help      2  Rdrlist   3  End       4  Return    5  Cmd      6  Index  │
│  PF: 7  ...       8  ...       9  Probrep  10  ...       11  ...    12  Cursor │
│                                                                               │
│  ===>                                                                         │
│                                                                               │
└─────────────────────────────────────────────────────────────────────────────┘
```

Figure 27. Stop an RSCS Link

```
┌──────────────────┐
│    System        │
│ Administrator    │
│    Tasks         │
└──────────────────┘
        4│
┌──────────────────┐
│    Manage        │
│    RSCS          │
└──────────────────┘
        2│
┌──────────────────┐
│    Change        │
│    RSCS          │
│    System        │
└──────────────────┘
        4│
┌──────────────────┐
│    Stop          │
│    RSCS          │
│    Link          │
└──────────────────┘
```

The panel in Figure 27 lets you stop a link (or make it "inactive"). Once a link is inactive, you cannot send information (file, messages, and so forth) to the remote system. When you stop a link, the files in the queue (if there are any) are held until you start the link again.

This panel asks you for the following:

The linkid

This is the "name" of the link. A linkid must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$$ \$ \quad \# \quad @ \quad + \quad - \quad : $$

Display links first?

Type an X in this field to see a list of all the links (active and inactive) you can choose from. If there are no files in the queue, you will see something like this:

```
DMTCMX670I LINK NYC CONNECT -- DMTVMB LINE AOA NOH NOD NOT
DMTCMX671I LINK BOSTON INACTIVE -- DEFAULT DMTVMB LINE BOB
DMTCMX670I LINK CHICAGO ACTIVE -- DMTVMB LINE COC NOH NOD TRL
DMTCMX674I NO FILES QUEUED
```

Or, if there are files in the queue:

```
DMTCMX670I LINK NYC CONNECT -- DMTVMB LINE AOA NOH NOD NOT
DMTCMX671I LINK BOSTON INACTIVE -- DEFAULT DMTVMB LINE BOB
DMTCMX670I LINK CHICAGO ACTIVE -- DMTVMB LINE COC NOH NOD TRL
DMTCMX654I LINK NYC S=0 R=0 Q=1 P=0
```

Add a Route to the RSCS Directory

```
RSC$312                 ADD A ROUTE TO THE RSCS DIRECTORY
---------------------------------------------------------------------------------



         Type the route and the existing linkid that you will be
    using below.



                              The route:  _____
                              The linkid: _____




---------------------------------------------------------------------------------
PF: 1  Help     2  Rdrlist  3  End     4  Return   5  Cmd     6  Index
PF: 7  ...      8  ...      9  Probrep 10 ...      11 ...     12 Cursor

===>
```
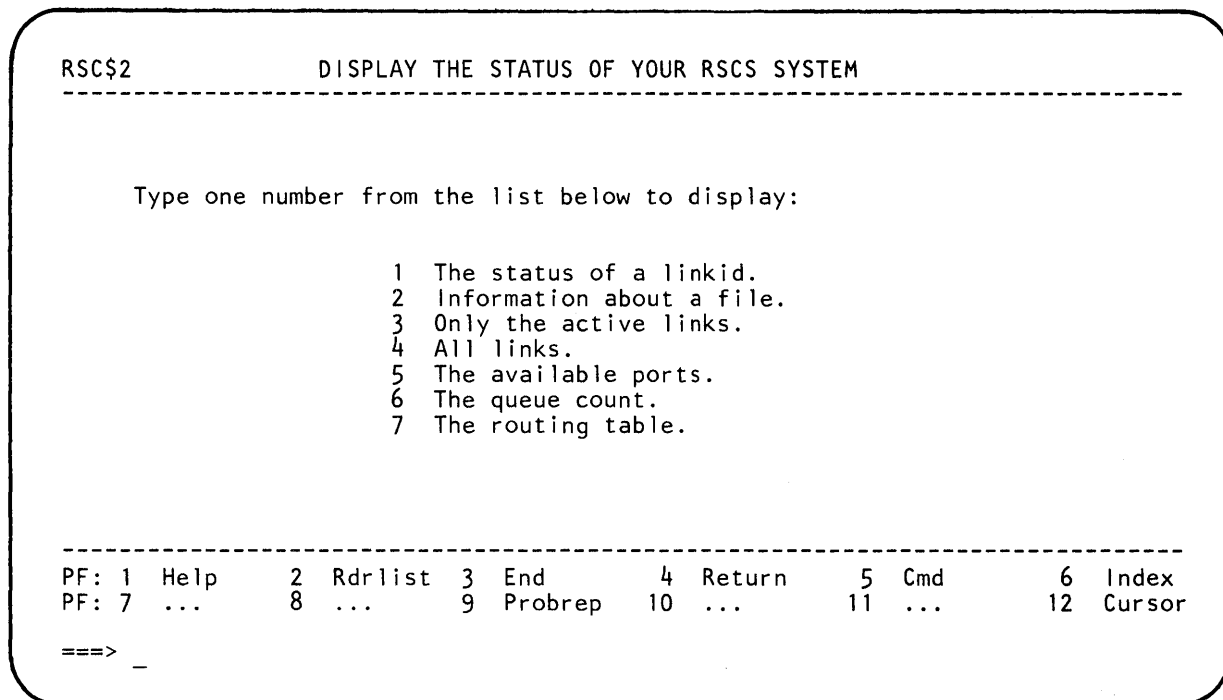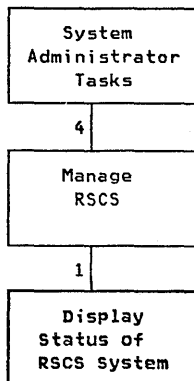
Figure 28. Add a Route to the RSCS Directory

```
┌──────────────┐
│   System     │
│Administrator │
│   Tasks      │
└──────┬───────┘
      4│
┌──────┴───────┐
│   Manage     │
│   RSCS       │
└──────┬───────┘
      2│
┌──────┴───────┐
│  Change      │
│  RSCS        │
│  System      │
└──────┬───────┘
      1│
┌──────┴───────┐
│  Add Link    │
│ or Route to  │
│  Directory   │
└──────┬───────┘
      2│
┌──────┴───────┐
│  Add Route   │
│  to RSCS     │
│  Directory   │
└──────────────┘
```
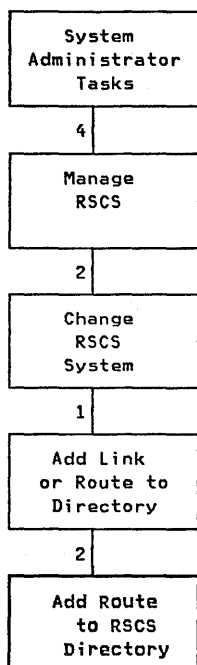
The panel in Figure 28 lets you add a route to the RSCS directory. A route is an indirect connection to another computer system. In other words, you cannot get to the other system directly; you have to go through one or more other systems.

This panel asks you for the following:

The route

This is the "name" of the route. A route name must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ # @ + - :

The linkid

This is the "name" of the link. It is an existing linkid and must already be defined in the RSCS directory, or the system will not know how to set up the route.

A linkid must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ # @ + - :

Delete a Route from the RSCS Directory

```
 ┌─────────────────────────────────────────────────────────────────────────────┐
 │                                                                               │
 │   RSC$322              DELETE A ROUTE FROM THE RSCS DIRECTORY                  │
 │   --------------------------------------------------------------------------- │
 │                                                                               │
 │                                                                               │
 │            Type the name of the route that you want deleted below.            │
 │                                                                               │
 │                                                                               │
 │                          The route name: _____                            │
 │                                                                               │
 │                                                                               │
 │                                                                               │
 │            If you want to see all of the available routes before you          │
 │          start, type an X below.                                             │
 │                                                                               │
 │                                                                               │
 │                          _ Display routes first?                             │
 │                                                                               │
 │                                                                               │
 │                                                                               │
 │   --------------------------------------------------------------------------- │
 │   PF: 1  Help      2  Rdrlist  3  End       4  Return   5  Cmd      6  Index   │
 │   PF: 7  ...       8  ...      9  Probrep  10  ...      11  ...     12  Cursor │
 │                                                                               │
 │   ===>                                                                        │
 │                                                                               │
 └─────────────────────────────────────────────────────────────────────────────┘
```

Figure 29. Delete a Route from the RSCS Directory

```
┌─────────────────┐
│    System       │
│ Administrator   │
│    Tasks        │
└────────┬────────┘
        4│
┌─────────────────┐
│    Manage       │
│    RSCS         │
└────────┬────────┘
        2│
┌─────────────────┐
│    Change       │
│    RSCS         │
│    System       │
└────────┬────────┘
        2│
┌─────────────────┐
│  Delete Link    │
│ or Route from   │
│   Directory     │
└────────┬────────┘
        2│
┌─────────────────┐
│  Delete Route   │
│   from RSCS     │
│   Directory     │
└─────────────────┘
```

The panel in Figure 29 lets you delete (or "erase") a route from the RSCS directory. When you delete a route, all files waiting in the queue ("inactive" files) will be lost. Only the file that is going across (the "active" file) will finish.

This panel asks you for the following:

The route name

This is the "name" of the existing route. A route name must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

> $ #   @   +   -   :

Display routes first?

Type an X in this field to see a list of the available routes you can choose from. If you do this, you will see something like:

```
DMTCMX6361  NYC ROUTED THROUGH LINK CHICAGO
DMTCMX6361  MIAMI ROUTED THROUGH LINK ATLANTA
DMTCMX6361  DALLAS ROUTED THROUGH LINK CHICAGO
DMTCMX6361  MIAMI ROUTED THROUGH LINK NYC
DMTCMX6361  SEATTLE ROUTED THROUGH LINK CHICAGO
```

Restart All of RSCS

```
RSC$333                    RESTART ALL OF RSCS
-------------------------------------------------------------------------------


          Do you want to restart all of RSCS? Type an X before your
      answer.

                       _ Yes              _ No



          If you want to see if any of the links are active before
      you start, type an X below.


                       _ Display links first?



-------------------------------------------------------------------------------
PF: 1  Help      2  Rdrlist  3  End       4  Return  5  Cmd     6  Index
PF: 7  ...       8  ...      9  Probrep   10 ...      11 ...     12 Cursor

===>
```

Figure 30. Restart All of RSCS

```
┌─────────────────┐
│     System      │
│  Administrator  │
│     Tasks       │
├─────────────────┤
│  4              │
├─────────────────┤
│     Manage      │
│     RSCS        │
├─────────────────┤
│  2              │
├─────────────────┤
│     Change      │
│     RSCS        │
│     System      │
├─────────────────┤
│  5              │
├─────────────────┤
│    Restart      │
│    All of       │
│     RSCS        │
└─────────────────┘
```
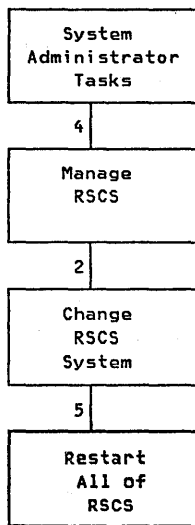
The panel in Figure 30 lets you restart (or "IPL") RSCS. You will probably only use this when there is a problem with RSCS. This panel asks you for the following:

Do you want to restart all of RSCS?

> If you want to restart RSCS, you *must* type an X in the **Yes** field. *If you type any other character in this field, the system will not restart RSCS.*

Display links first?

> Type an X in this field to see a list of all the links (active and inactive) you can choose from. If there are no files in the queue, you will see something like this:

```
DMTCMX670I LINK NYC CONNECT -- DMTVMB LINE 00A NOH NOD NOT
DMTCMX671I LINK BOSTON INACTIVE -- DEFAULT DMTVMB LINE 00B
DMTCMX670I LINK CHICAGO ACTIVE -- DMTVMB LINE 00C NOH NOD TRL
DMTCMX674I NO FILES QUEUED
```

> Or, if there are files in the queue:

```
DMTCMX670I LINK NYC CONNECT -- DMTVMB LINE 00A NOH NOD NOT
DMTCMX671I LINK BOSTON INACTIVE -- DEFAULT DMTVMB LINE 00B
DMTCMX670I LINK CHICAGO ACTIVE -- DMTVMB LINE 00C NOH NOD TRL
DMTCMX654I LINK NYC S=0 R=0 Q=1 P=0
```

Change the Name of Your RSCS System

```
RSC$313              CHANGE THE NAME OF YOUR RSCS SYSTEM
----------------------------------------------------------------------------



         Type the name that you want your system to be known by below.


                 The new local name: _____




         Warning - You should only change the local name once. This is
                   the name that other systems know you by. If you
                   change it, you will have to inform all the systems
                   you have contact with because they will have to
                   change all their links to you.

----------------------------------------------------------------------------
PF: 1  Help      2  Rdrlist  3  End        4  Return   5  Cmd     6   Index
PF: 7  ...       8  ...      9  Probrep   10  ...      11  ...    12  Cursor

===>
```

Figure 31. Change the Name of Your RSCS System

```
  System
Administrator
  Tasks

    4

  Manage
  RSCS

    2

  Change
  RSCS
  System

    6

  Change
  Name of
RSCS System
```
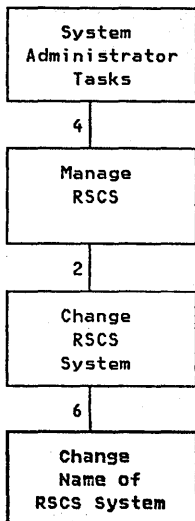
The panel in Figure 31 lets you change the name (or "nodeid") of your RSCS system. This is the name that other systems know you by. *Do not do this frequently!* Every time you change the name of your RSCS system, you have to tell *all* the other systems what you have done, and they have to change all their links to you.

This panel asks you for the following:

The new local name

This is the "name" that other systems use to refer to your system.

Acceptable Names	Unacceptable Names
OURNAME	OUR NAME
SYSTEM6	SYSTEMSIX
SYS2	SYSTEM 2

The local name must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ # @ + - :

Status Information

```
┌─────────────────────────────────────────────────────────────────────────────┐
│                                                                               │
│   RSC$2                    DISPLAY THE STATUS OF YOUR RSCS SYSTEM              │
│   --------------------------------------------------------------------------  │
│                                                                               │
│                                                                               │
│        Type one number from the list below to display:                        │
│                                                                               │
│                          1  The status of a linkid.                           │
│                          2  Information about a file.                          │
│                          3  Only the active links.                            │
│                          4  All links.                                        │
│                          5  The available ports.                              │
│                          6  The queue count.                                  │
│                          7  The routing table.                                │
│                                                                               │
│                                                                               │
│                                                                               │
│   --------------------------------------------------------------------------  │
│   PF: 1  Help     2  Rdrlist  3  End        4  Return   5  Cmd     6  Index   │
│   PF: 7  ...      8  ...       9  Probrep   10  ...     11  ...    12  Cursor  │
│                                                                               │
│   ===>  _                                                                      │
└─────────────────────────────────────────────────────────────────────────────┘
```

Figure 32. Display the Status of Your RSCS System

```
┌─────────────────┐
│     System      │
│  Administrator  │
│     Tasks       │
└─────────────────┘
        4│
┌─────────────────┐
│     Manage      │
│     RSCS        │
└─────────────────┘
        1│
┌─────────────────┐
│    Display      │
│   Status of     │
│  RSCS System    │
└─────────────────┘
```

The panel in Figure 32 lets you check on RSCS by displaying one of the following:

The status of a linkid

If you type 1 and press the ENTER key, you will see the panel in Figure 33 on page 119. This panel will ask you for the linkid that you want to check on.

Information about a file

If you type 2 and press the ENTER key, you will see the panel in Figure 34 on page 121. This panel will ask you for the spoolid of the file you want to check on.

Only the active links

If you type 3 and press the ENTER key, you will see a list of all the active links. You will not see a data entry panel, because the system does not need any more information.

The system will show you the linkid, line driver type, address, and status (hold, drain, and trace) for each active link. It will look something like this:

```
DMTCMX6701  LINK NYC CONNECT -- DMTVMB LINE AOA NOH NOD NOT
DMTCMX6701  LINK BOSTON CONNECT -- DMTVMB LINE BOB NOH NOD NOT
DMTCMX6701  LINK CHICAGO ACTIVE -- DMTVMB LINE COC NOH NOD TRL
```

All links

If you type 4 and press the ENTER key, you will see a list of all the links: active and inactive. You will not see a data entry panel, because the system does not need any more information.

For the active links, the system will show you the linkid, line driver type, address, and status (hold, drain, and trace). For the inactive links, the system will show you the linkid, activity status, default line driver type, and default address. It will look something like this:

```
DMTCMX670I LINK NYC CONNECT -- DMTVMB LINE AOA NOH NOD NOT
DMTCMX671I LINK BOSTON INACTIVE -- DEFAULT DMTVMB LINE BOB
DMTCMX670I LINK CHICAGO ACTIVE -- DMTVMB LINE COC NOH NOD TRL
```

The available ports

If you type 5 and press the ENTER key, you will see a list of all the available ports. You will not see a data entry panel, because the system does not need any more information.

The system will show you the linkid of the ports that are being used and their addresses. It will look something like this:

```
DMTCMX626I PORT 060 AVAILABLE
DMTCMX626I PORT 2A2 AVAILABLE
DMTCMX626I PORT DEC AVAILABLE
```

Or, if there are no ports available, you will see:

```
DMTCMX625I NO PORTS AVAILABLE
```

The queue count

If you type 6 and press the ENTER key, you will see a list of all the links that have files waiting in their queues. You will not see a data entry panel, because the system does not need any more information.

The system will show you the linkid, the number of files being sent and received, the number of files that were accepted and which are enqueued, and the number of files that are pending. It will look something like this:

```
DMTAXM101I FILE 3639 (3639) ENQUEUED ON LINK NYC
DMTCMX654I LINK NYC S=0 R=0 Q=1 P=0
```

Or, if there are no files in the queue, you will see:

```
DMTCMX674I NO FILES QUEUED
```

The routing table

If you type 7 and press the ENTER key, you will see a list of all the routes you have defined. You will not see a data entry panel, because the system does not need any more information.

The system will show you the linkid of each route. It will look something like this:

```
DMTCMX636I NYC ROUTED THROUGH LINK CHICAGO
DMTCMX636I MIAMI ROUTED THROUGH LINK ATLANTA
```

```
┌─────────────────────────────────────────────────────────────────────────────┐
│                                                                             │
│  RSC$21                    DISPLAY THE STATUS OF A LINKID                    │
│  ---------------------------------------------------------------------------│
│                                                                             │
│               Type the linkid below.                                        │
│                                                                             │
│                                                                             │
│                          The linkid: _____                               │
│                                                                             │
│                                                                             │
│               (Optional) If you want to display extra information below,    │
│         type an X before each one that you want.                            │
│                                                                             │
│               _  Active file information (ACTIVE)                           │
│               _  Default attributes (DEF)                                   │
│               _  File status (FILES)                                        │
│               _  File queue (QUEUE)                                         │
│               _  Transaction and line error counters (SUM)                  │
│                                                                             │
│                                                                             │
│  ---------------------------------------------------------------------------│
│  PF: 1  Help     2  Rdrlist  3  End      4  Return   5  Cmd      6  Index    │
│  PF: 7  ...      8  ...      9  Probrep  10 ...       11 ...      12 Cursor  │
│                                                                             │
│  ===>                                                                       │
│                                                                             │
└─────────────────────────────────────────────────────────────────────────────┘
```

Figure 33. Display the Status of a Linkid

```
┌─────────────────┐
│     System      │
│ Administrator   │
│     Tasks       │
└─────────────────┘
        │4
┌─────────────────┐
│     Manage      │
│      RSCS       │
└─────────────────┘
        │1
┌─────────────────┐
│    Display      │
│   Status of     │
│  RSCS System    │
└─────────────────┘
        │1
┌─────────────────┐
│    Display      │
│   Status of     │
│    Linkid       │
└─────────────────┘
```
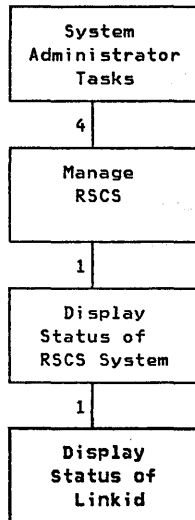
The panel in Figure 33 lets you check the status of one linkid. This panel asks you for the following:

The linkid

This is the "name" of the link that you want to check on. A linkid must be at least one, but no more than eight, characters long. You can use any combination of letters and numbers. You cannot use blanks. The only special characters you can use are:

$ \qquad \# \qquad @ \qquad + \qquad - \qquad :$

Whether or not you choose any of the optional fields described below, you will see something like:

DMTCMX652I LINK NYC CONNECT VMBA DMTVMB AOA * NOH NOD NOT

The fields described below are all optional.

Active file information

If you type an X in this field, you will see information about the active file descriptors for this link. It will look something like:

DMTCMX656I FILE 3639 (3639) BOSTON USERA CL A FO
    STANDARD STANDARD PR 50 LEFT 00000006 OF 00000099

Or, if there is no active file for this link:

```
DMTCMX665I NO FILE ACTIVE
```

Default Attributes

If you type an X in this field, you will see the default attributes of the link. It
will look something like:

```
DMTCMX653I LINK NYC DEFAULT VMBA DMTVMB 030 * Z=5 R=16
```

File status

If you type an X in this field, you will see the file status of the link. It will look
something like:

```
DMTCMX654I LINK NYC S=0 R=0 Q=1 P=0
```

File Queue

If you type an X in this field, you will see a brief description of each inactive
file in the queue. You will see the files (if there are more than one) in the same
order that they appear in the queue. It will look something like:

```
DMTCMX654I LINK NYC S=0 R=0 Q=1 P=0
DMTCMX655I FILE 3639 (3639) BOSTON USERA CL A FO
   STANDARD STANDARD PR 50 REC 00000031 HO
```

Transaction and line error counters

If you type an X in this field, you will see summary information about the
transaction and error counters maintained by the line driver concerning activity
on the communications adapter. It will look something like:

```
DMTCMX149I LINK NYC LINE ACTIVITY: TOT= 00008742;
   ERRS= 00000001; TMOUTS= 00000039
```

Information about a File

```
┌─────────────────────────────────────────────────────────────────────────────┐
│                                                                               │
│   RSC$22                    DISPLAY INFORMATION ABOUT A FILE                   │
│   ------------------------------------------------------------------------    │
│                                                                               │
│                                                                               │
│         Type the spoolid of the file below.                                   │
│                                                                               │
│                                                                               │
│                             The spoolid: ____                                 │
│                                                                               │
│                                                                               │
│                                                                               │
│           (Optional) If you want to display extra information about a         │
│         file, type an X before each one that you want.                        │
│                                                                               │
│               _   Status information (STAT = the default)                     │
│               _   Spool system attributes (VM)                                │
│               _   RSCS control attributes and status (RSCS)                   │
│                                                                               │
│                                                                               │
│   ------------------------------------------------------------------------    │
│   PF: 1  Help      2  Rdrlist  3  End       4  Return   5  Cmd      6  Index   │
│   PF: 7  ...       8  ...      9  Probrep  10  ...      11 ...      12 Cursor  │
│                                                                               │
│   ===>                                                                        │
│                                                                               │
└─────────────────────────────────────────────────────────────────────────────┘
```

Figure 34. Display Information about a File

```
┌─────────────────┐
│     System      │
│  Administrator  │
│      Tasks      │
├─────────────────┤
│ 4               │
├─────────────────┤
│     Manage      │
│      RSCS       │
├─────────────────┤
│ 1               │
├─────────────────┤
│    Display      │
│   Status of     │
│  RSCS System    │
├─────────────────┤
│ 2               │
├─────────────────┤
│    Display      │
│     File        │
│  Information     │
└─────────────────┘
```
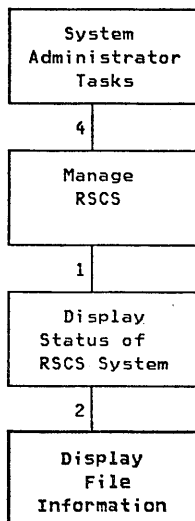
The panel in Figure 34 lets you look at information about an inactive file in the queue. This panel asks you for the following:

The spoolid

This is the "number" that RSCS has assigned to the file. If you type in a spoolid and choose not to type an X in any of the optional fields, you will see the same thing you would see if you had typed an X in the **Status information** field. This is because Status information is the default. A description follows.

The fields described below are all optional.

Status information

If you type an X in this field, RSCS will tell you whether or not the file is active and what link it is on. For example, if you typed 3639 for the spoolid, you would see something like:

DMTCMX660I FILE 3639 INACTIVE ON LINK NYC

Spool system attributes

If you type an X in this field, you will see information about the spool system related attributes of this file. It will look something like:

DMTCMX663I FILE 3639 PR 50 CL A FO STANDARD STANDARD
          CO 1 HO DI SYSPROG, NA FILEA SCRIPT

RSCS control attributes and status

If you type an X in this field, you will see information about the RSCS control related attributes and status of this file. It will look something like:

```
DMTCMX6621 FILE 3639 ORG SYSB USERB ORGID 3639 10/3/83
   14:54:46 E.S.T. TO OURSYS USERA
```

```
RSC$1              DISPLAY THE STATUS OF A REMOTE SYSTEM
--------------------------------------------------------------------------------
         Type the nodeid of the system you are interested in.

                         The nodeid: _____

        Type an X before anything you want to know about the remote
      system.

                      _   Display the CPU status.
                      _   Display the log message.
                      _   Display the time.
                      _   List all of the logged-on users.
                      _   See if a user is logged on.
                             ( Userid = _____ )

        Note -  If you want to "see if a user is logged on" you must
                also type the userid. If you leave the userid blank,
                you will see the number of users logged on.
--------------------------------------------------------------------------------
PF: 1  Help      2  Rdrlist  3  End      4  Return    5  Cmd     6  Index
PF: 7  ...       8  ...      9  Probrep  10  ...      11  ...    12  Cursor

===>
```

Figure 35. Display the Status of a Remote System

```
    System
Administrator
    Tasks
      |
     4|
  Manage
   RSCS
      |
     3|
  Display
  Status of
Remote System
```
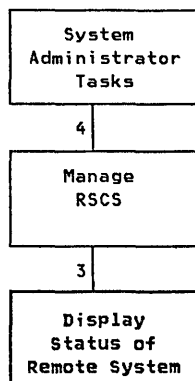
The panel in Figure 35 lets you check the status of a remote system. Because you are asking for information from another system, there will be a time delay before you get your response. Once you have filled in this panel and have pressed the ENTER key, the panel will reappear. To see the response from the other system, press the CLEAR key.

Note: All of the messages described below are prefaced with:

DMTRGX1701 FROM 'nodeid': CPQ

('nodeid' will be replaced with whatever you type in **The nodeid** field.) To save space, this preface does not appear below.

This panel asks you for the following:

The nodeid

This is the "name" of the other system. If you type a nodeid that the system cannot recognize, you will see something like:

DMTCMX310E LOCATION 'nodeid' IS NOT DEFINED

Display the CPU status

Type an X in this field, if you want to check the status of another system's CPU. It will look something like this:

CPU   - 100% APU   - 000% Q1-02 Q2-08 STORAGE-052% EXPAN-012
PAGING-129/SEC STEAL-021% LOAD-001%

This is the **CP INDICATE** command. If you need more information about CP INDICATE, see the *VM/SP CP Command Reference for General Users*.

Display the log message

Type an X in this field, if you want to read another system's log message. This is the **CP QUERY LOGMSG** command. If you need more information about CP QUERY LOGMSG, see the *VM/SP Operator's Guide*.

Display the time

Type an X in this field, if you want to see what time it is according to another system. You will see something that looks like:

```
TIME IS 09:36:45 EST MONDAY 12/12/83
CONNECT= 06:19:03 VIRTCPU= 004:43.45 TOTCPU= 005:30.50
```

This is the **CP QUERY TIME** command. If you need more information about CP QUERY TIME, see the *VM/SP CP Command Reference for General Users*.

List all of the logged-on users

Type an X in this field, if you want to see a list of users who are logged on to or disconnected from another system. You will see something like:

```
USER0     - DSC, USER1   - 001, USER2   - 002, USER3   - 003
USER10    - AOA, USER11  - BOB, USER12  + COC, USER13  - DSC
USER20    + 014, USER21  - 015, USER22  - 016, USER23  - 017
USER30    - 01E, USER31  - DSC, USER32  - 020, USER33  + 021
USER40    - 028, USER41  + 029, USER42  - DSC, USER43  - 002B
USER50    - 032, USER51  - 033, USER52  - 034, USER53  - DSC
```

This is the **CP QUERY NAMES** command. If you need more information about CP QUERY NAMES, see the *VM/SP CP Command Reference for General Users*.

See if a user is logged on

Type an X in this field *and* a userid, if you want to know if a specific user is logged on to another system. You will see something like:

```
CARTER    - ACE
```

This is the **CP QUERY userid** command. If you need more information about CP QUERY userid, see the *VM/SP CP Command Reference for General Users*.

If you want to know *how many* users are logged on to that system, leave the **Userid** field blank. You will see something like:

```
126 USERS, 010 DIALED, 000 NET
```

This is the **CP QUERY USERS** command. If you need more information about CP QUERY USERS, see the *VM/SP CP Command Reference for General Users*.

Chapter 6. Error messages

This chapter contains the system messages that may be displayed while you are installing IPF, using the System Support and RSCS dialogs, or when you are using the VM/IPF Index facility.

System messages are a set of sentences that are stored in the memory of the computer. Each message describes a problem or a warning, or contains information about what is going on with the task you are trying to do. Sometimes you may find it necessary to have more information about the message than the computer is able to display. This chapter will explain in detail the meaning and significance of most of the panel messages that will be displayed when using the dialogs mentioned above. In addition, this section describes what, if anything, the system did (or is doing) since your last action. If a response to the message is required by you, then that action will also be described.

Each message is divided into five parts:

1. The message identifier

2. The display message

3. The explanation

4. The system response

5. Your response

If you are unfamiliar with any one or all of these message parts, refer to the *VM/IPF Administration Messages* or to the *VM/IPF General Use Messages*, for a description.

Messages that appear on the panel's message line are not the only messages you can receive while using VM/IPF. Other messages you can receive interrupt the panel. That is, these types of messages, when displayed, remove the panel from the screen.

Note that when you are installing VM/IPF, no panels are used. However, system messages can be generated and displayed from the install execs. These system messages are in the same format as the messages that are displayed on the message line of the panels.

Messages that Appear on Panel Message Line

EP/VS

EPV000-An entry for the first rate is required.

>*Explanation:* You did not complete the entry area requiring the first oscillator rate. If you leave the first rate blank, the remaining fields are assumed to be blank also.

>*System Response:* The system is waiting for you to complete the panel correctly. Nothing has changed.

>*Your Response:* Beginning with the first rate, complete the panel again and press the ENTER key. Once you leave one entry area blank, the system will assume that the remaining fields are blank also.

EPV001-Unsuccessful in attaching device _____.

>*Explanation:* The tape drive you specified was not attached successfully.

>*System Response:* When the system noticed the error the task was halted. Nothing has changed.

>*Your Response:* Make sure that the address you specified is correct and not currently attached to another user. Complete the panel again and then press the ENTER key.

EPV002-The 3704 supports only ONE channel adapter.

>*Explanation:* You specified the 3704 controller and 2 channel adapters. The 3704 controller supports only ONE channel adapter.

>*System Response:* The system is waiting for you to complete the panel correctly. Nothing has changed.

>*Your Response:* When you specify the 3704 controller, then only ONE adapter can be supported. Complete the panel again and then press the ENTER key.

EPV030-_____ is invalid. Please try again.

>*Explanation:* You specified invalid data in one of the entry areas.

>*System Response:* The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Carefully check the data you entered on the panel. If you are not sure if the data is correct, then refer to the help panels that accompany the task panel you are currently working with for this information. Complete the panel again and then press the ENTER key.

EPV033-_____ is not a valid line interface address.

Explanation: The line interface address you specified cannot be used by the system. A line interface address is the address from which the controller will receive data during a wraparound test.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Carefully complete the panel again and then press the ENTER key.

EPV034-Adapter must be either Type 1 or Type 4.

Explanation: The adapter type you specified is incorrect. The adapter must be either Type 1 or Type 4.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Specify the adapter as either Type 1 or Type 4. If you are unsure which type to specify, then refer to the help panels that accompany the task panel you are working with. Complete the panel again and then press the ENTER key.

EPV035-_____ is invalid. Entry must be hexadecimal.

Explanation: Then entry you specified is not in hexadecimal form.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Your entry must be in hexadecimal form. Carefully complete the panel again and then press the ENTER key.

EPV036-Address must be 3 characters in length.

Explanation: The address you specify must be 3 characters long.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Carefully complete the panel again and then press the ENTER key.

EPV038-_____ is invalid. See HELP for entry description.

> *Explanation:*   The data you entered cannot be used by the system.
>
> *System Response:*   The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:*   Refer to any help panels that accompany this task panel for the correct type of data the system will be able to use. Complete the panel again and then press the ENTER key.

EPV039-_____ is invalid. See HELP for valid entries.

> *Explanation:*   The data you entered cannot be used by the system.
>
> *System Response:*   The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:*   Refer to any help panels that accompany this task panel for the correct type of data the system will be able to use. Complete the panel again and then press the ENTER key.

EPV040-Address must be 2 characters in length.

> *Explanation:*   The address you specify must be 2 characters long.
>
> *System Response:*   The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:*   Carefully complete the panel again and then press the ENTER key.

EPV041-_____ is invalid. Entry must be numeric.

> *Explanation:*   The data you enter for the line speed must consist of all numbers. The system cannot use an entry with letters or special characters in it.
>
> *System Response:*   The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:*   Carefully complete the panel again and then press the ENTER key.

EPV042–Line speed must be from 2 to 5 digits in length.

Explanation: The line speed you specify must be at least 2 but no more than 5 digits long.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Carefully complete the panel again and press the ENTER key.

EPV044–Stage _____ of the generation is in progress.

Explanation: The system is currently executing a stage of EP/VS generation. Stage 1 of the generation assembles the macros in the ASM3705 file. Stage 2 of the generation produces a load module of the EP/VS control program.

System Response: The system is executing the EP/VS generation.

Your Response: None.

EPV045–Error in stage _____ .... Press ENTER to return.

Explanation: There is an error in the stage the system is trying to execute.

System Response: When the system noticed the error the task was halted. Nothing has changed.

Your Response: Press the ENTER key to return to the EP/VS primary menu panel (EPV$73). Choose the Create/Modify option to examine the ASM3705 file and the files created as output from the generation procedure. The location of the error may be determined by reviewing these files.

EPV046–Press ENTER to begin stage 2 of the generation.

Explanation: When you press the ENTER key, stage 2 of the generation will produce a load module of the EP/VS control program.

System Response: None.

Your Response: Press the ENTER key to begin stage 2.

EPV047–Generation successful. Press ENTER to return.

Explanation: The system has successfully generated EP/VS. This means that first the macros in the ASM3705 file were assembled and then a load module of the EP/VS control program was produced.

System Response: None.

Your Response: Press the ENTER key to return to the EP/VS primary menu panel (EPV$73).

EPV048–Save of EP/VS failed. Press ENTER to return.

Explanation: An error in response to the SAVENCP command caused the save of EP/VS to fail.

System Response: When the system noticed the error the task was halted. An error message may have been displayed to the screen.

Your Response: Press the ENTER key to return to the EP/VS primary menu panel (EPV$73).

EPV049–EP/VS has been saved. Press ENTER to return.

Explanation: The system has successfully saved EP/VS. This means that the EP/VS control program has been read and loaded into virtual storage.

System Response: None.

Your Response: Press the ENTER key to return to the EP/VS primary menu panel (EPV$73).

EPV052–_____ EXEC created by generation has failed.

Explanation: When the system tried to generate EP/VS, this exec that the system uses in the generation failed.

System Response: When the system noticed the error the task was halted. Nothing has changed.

Your Response: Press the ENTER key to return to the EP/VS primary menu panel (EPV$73). Choose the Create/Modify option to examine the ASM3705 file and the files created as output from the generation procedure. The location of the error may be determined by reviewing these files.

EPV067–Do not enter both tape address and disk address.

Explanation: You entered an address for both a tape and a disk. You cannot specify both at the same time.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Choose whether or not you need to work with a tape or with a disk. Fill in the appropriate entry field. If you choose to work with a disk make sure you also complete the entry for the filemode. Complete the panel again and then press the ENTER key.

EPV068–Enter both address and filemode for the disk.

Explanation: You need to enter both the disk address and the filemode of the disk in order for the system to know which disk you want to use.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Complete the panel again and then press the ENTER key.

EPV075–A Type 1 adapter has only ONE subchannel address.

Explanation: You are currently working with a type 1 adapter; therefore, you can specify only ONE subchannel address.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Complete the panel again and then press the ENTER key.

EPV082–Speeds are not in ascending order.

Explanation: The oscillators are installed in the communications scanner according to ascending order of speed; therefore, you must specify the rates in ascending order.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Complete the panel again, entering the rates in ascending order, and then press the ENTER key.

EPV083–Enter either a tape address or disk information.

Explanation: You did not specify a tape address or disk information. You must specify one or the other so the system will know which you want to work with.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Choose whether or not you need to work with a tape or with a disk. Fill in the appropriate entry field. If you choose to work with a disk make sure you also complete the entry for the filemode. Complete the panel again and then press the ENTER key.

EPV084-Please make an entry in the required field.

Explanation: You have left a required entry field blank.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Complete the panel again and then press the ENTER key.

Index

INDEX001-You just re-set the interrupt mode to IMMED.

> *Explanation:* You just pressed the PF9 key. This changed your interrupt mode from GUEST to IMMED. When the interrupt mode is set to IMMED, the system can temporarily remove a panel from your terminal screen to display a message that someone has sent to you. Setting the interrupt mode to GUEST will prevent any such interruption, and any message sent to you will be saved for later.
>
> *System Response:* The system has re-set your interrupt mode to IMMED.
>
> *Your Response:* If you want to be in IMMED interrupt mode, then you need do nothing more about it. If you want to change back to GUEST interrupt mode, then press the **PF9** key once.

INDEX002-You just re-set the interrupt mode to GUEST.

> *Explanation:* You just pressed the PF9 key. This changed your interrupt mode from IMMED to GUEST. When the interrupt mode is set to IMMED, then the system can temporarily remove a panel from your terminal screen to display a message that someone has sent to you. Setting the interrupt mode to GUEST will prevent any such interruption, and any message sent to you will be saved for later.
>
> *System Response:* The system has re-set your interrupt mode to GUEST.
>
> *Your Response:* If you want to be in GUEST interrupt mode, then you need do nothing more about it. If you want to change back to IMMED interrupt mode, then press the **PF9** key once.

INDEX003-Put cursor next to panel or option name you want, and press PF10.

> *Explanation:* You tried to select a panel name or option name from the USER DIALOG INDEX. You placed the cursor next to a line on your screen, then pressed the PF10 key. The line to which you moved the cursor is not a line containing the name of a panel or option. It was an invalid choice.
>
> *System Response:* The system could do nothing.
>
> *Your Response:* Check the list on your screen again for the name of the panel or option you are interested in. Your choice must be between the the second and third broken lines on the screen. Do not select a line containing the phrase **TOP OF FILE** or **END OF FILE**. Move the cursor to the line of your choice, then press the **PF10** key.

INDEX

INDEX004–This character string was not found in the list.

> ***Explanation:*** Your task is to find a certain string of characters somewhere in the USER DIALOG INDEX. The system could not find the character string you typed.
>
> ***System Response:*** None.
>
> ***Your Response:*** If this is not the response you expected, be certain that you typed the string of characters correctly. If not, re-type it on the panel's command line, and press the **PF2** key.

INDEX005–Type string you are looking for and press ENTER key.

> ***Explanation:*** You pressed the PF2 key, indicating that you are looking for a specific string of characters in the USER DIALOG INDEX. However, you did not type the character string you are looking for.
>
> ***System Response:*** The system could do nothing.
>
> ***Your Response:*** Type the string of characters you are looking for on the panel's command line, then press the **ENTER** key.

INDEX999–INDEX will not run in a virtual machine larger than _____ K.

> ***Explanation:*** The system will not permit the USER DIALOG INDEX facility to work in a virtual machine whose storage size is beyond a certain limit. That limit, which was set by your organization at the time the system was installed, is mentioned in the message.
>
> ***System Response:*** None.
>
> ***Your Response:*** If you must use the USER DIALOG INDEX facility, you will have to do one of two things. Either consult with your system administrator to see if there is a way to use INDEX with your present storage size, or decrease the size of your virtual machine's storage.
>
> To do the latter, type the following command on the panel's command line. Substitute for the letter "x" a number less than or equal to the limit mentioned in the message.
>
> ```
> DIRMAINT STORAGE xK
> ```
>
> Now, press the **PF5** key.

IPFH

IPFH000–The system did not understand your last action.

> *Explanation:* You just did one of several things:
>
> 1. You pressed the ENTER key without typing anything on a panel data entry field.
>
> 2. You pressed the ENTER key without typing a command on the panel's command line.
>
> 3. You typed a number on the panel's command line that does not correspond to any choice given to you.
>
> 4. You pressed a PF key that has no function, that is, one that is marked with three dots ('...').
>
> 5. You incorrectly typed a CP, CMS, or EXEC command on the panel's command line, then pressed the ENTER key.
>
> The system will understand none of these actions, since none of them is valid.
>
> *System Response:* The system could do nothing.
>
> *Your Response:* If you are trying to give a CP or CMS command from the panel's command line, check the article dealing with the command in the *IBM Virtual Machine/System Product: CP Command Reference for General Users* or the *IBM Virtual Machine/System Product: CMS Command and Macro Reference* for help.
>
> If you are trying to select an option from a VM/IPF panel, read the panel's instructions carefully and follow them. You may want to check with the *IBM Virtual Machine/Interactive Productivity Facility: Administration Guide*, or with the *IBM Virtual Machine/Interactive Productivity Facility: General Use Guide* for help with your task. These publications also describe the proper use of PF keys.

RSC000-Your request has been sent. Press CLEAR to see results.

> *Explanation:* Your task is to get information on the status of a remote system. Since it may take some time to send the information back to you, this message lets you know that your request is being processed.
>
> *System Response:* Your system has sent your request to the other system, and is waiting for a response.
>
> *Your Response:* Press the **CLEAR** key to see the information you requested. You may have to press this key a few times, since the information you asked for may take a while to reach you.

RSC001-Give the node id or the link id.

> *Explanation:* Your task is one of two things.
>
> 1. To get information on the status of a remote system that your system is connected to within the network.
>
> 2. Or, to get information on the status of a communication link between your system and another within the network.
>
> In performing the first task, you have to identify the name of the system you are interested in by giving its node id. In performing the second task, you have to identify the link by giving its link id. Whichever is your task, you did not give the information required.
>
> *System Response:* The system could do nothing.
>
> *Your Response:* If you are working with the panel titled DISPLAY THE STATUS OF A REMOTE SYSTEM, type the system's node id. If you are working with the panel titled DISPLAY THE STATUS OF A LINKID, type the link id. Then, press the **ENTER** key.

RSC002-Give the spool id of file you are interested in.

> *Explanation:* Your task is to get certain information about a file. In order to give you this information, the system needs to know the file's spool id number. This is a four digit number the system gives to each file being transmitted so it can easily be identified. You did not give the spool id of the file.
>
> *System Response:* The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: If you are not certain what the spool id of the file is, go to the panel titled DISPLAY THE STATUS OF YOUR RSCS SYSTEM and select task number 1. On the panel titled DISPLAY THE STATUS OF A LINKID, type **The linkid** of the link handling this spool file. Type

    X

on the lines marked **Active file information** and **File queue**. Press the **ENTER** key. This will give you a list of any active spool files on that link, along with their spool file ids. Make a note of the spool id of the file you are interested in and return to the panel you were just working on. Type it on the line marked **The spoolid:**, then press the **ENTER** key.

RSC003-The RSCS virtual machine is not available now.

Explanation: The virtual machine that contains the RSCS system is not available right now. It may be because RSCS has never been installed in the system, or it may be because someone forced the RSCS virtual machine off the system. Regardless, you cannot perform any RSCS task until the RSCS virtual machine has been logged on.

System Response: None.

Your Response: If RSCS has never been installed, there is nothing you can do until it is.

If RSCS has been forced off the system, the operator or system administrator should log RSCS on again. To do this, one of them should type the following on the panel's command line, substituting for the letter "p" the log on password to the RSCS virtual machine.

    AUTOLOG RSCS p

Press the **PF5** key.

RSC004-The buffer size must be from 824 to 4072.

Explanation: Your task is to define a link between your system and a VM system that uses BSC. Part of this link contains a buffer whose size you must define. The buffer size you typed was a decimal number less than 824, greater than 4072, or something that was not a number at all.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Select a buffer size from 824 bytes to 4072 bytes and type it on the line marked **The buffer size:**. If you leave this line blank, then the buffer size will be 824 by default. Now, press the **ENTER** key.

RSC005-Link _____ already exists.

> *Explanation:*   Your task is to define a link between your system and another. But, a link to the other system already exists, so there is no need for another one.
>
> *System Response:*   The system kept the original link mentioned in the message, but did not define another one.
>
> *Your Response:*   Make use of the link that already exists.

RSC006-Task name _____ already being used. Choose another.

> *Explanation:*   Your task is to define a link between your system and another. A task name is just a one to four character label you place on a link to distinguish it from any other links **of the same type** that can be attached to the system.
>
> You already gave the task name mentioned in the message to another link on some other occasion. The other link may have gotten that task name in one of two ways. First, you may simply have typed that name on the line marked **The task name:** when you set up the link in the first place. Or, you may have typed an asterisk ("*") on that line. This would have resulted in the task name being the same as the first four characters of the link id for that link.
>
> In any event, you must select a different task name for the link you are defining now.
>
> *System Response:*   The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:*   Select another task name for the link. It can be any one to four character label you choose. Type it on the panel, then press the **ENTER** key.

RSC008-Select either Y or N, not both.

> *Explanation:*   The panel asks you to respond "Yes" or "No" by placing an **X** next to the letter **Y** or the letter **N**. You placed an **X** next to both. You can choose only one.
>
> *System Response:*   The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:*   Carefully read the panel's instructions. Respond "Yes" or "No" by typing
>
> X
>
> next to either **Y** or **N**.

RSC009–Release one of your disks, then perform your task.

Explanation: In order to perform your task your virtual machine must have access to the disk at virtual address 191 in the RSCS virtual machine. This means, in effect, that RSCS's 191 disk must temporarily become part of your virtual machine. It so happens that you have twenty-six virtual disks in your virtual machine. This is the most you can have. Each disk is identified by a single letter of the alphabet called its disk mode. So, since you have twenty-six disks, there are no more letters of the alphabet left to identify another one.

Since you already have the maximum number of virtual disks, you can access no more, and therefore cannot access the RSCS 191 disk you need to complete your task.

System Response: Nothing has changed.

Your Response: You have to temporarily get rid of one disk in your virtual machine. Type

```
Q DISK
```

on the panel's command line and press the **PF5** key. This will give you a list of all the disks in your virtual machine. Note that the address of each disk is given in the column headed **CUU**, and its disk mode is given in the column headed **M**.

Select a disk, other than your A DISK, that you do not need right now. Make a note of both its disk mode and virtual address. Type the following command, substituting the mode of the disk you have chosen.

```
RELEASE diskmode
```

Press the **PF5** key. This will, for the time being, remove this disk from your virtual machine.

Now, return to the panel you were working on originally and complete it carefully. After your task is finished, type the following command on the panel's command line, substituting the address and the mode of the disk you got rid of before.

```
ACCESS diskaddress diskmode
```

Now, press the **PF5** key. This will return the disk to your virtual machine.

RSC010–Error was caused by RSCS's 191 disk being full.

Explanation: The disk at virtual address 191 in the RSCS virtual machine is now full. Since nothing more can be recorded on this disk, the tasks you can perform with RSCS are quite limited, even though RSCS will continue to function normally as it is now set up.

System Response: The system will permit no task to be performed that requires recording anything more on RSCS's 191 disk.

Your Response: You have two options.

1. Erase certain **unneeded** files on the 191 disk within the RSCS virtual machine.

2. Or, if you are not sure how to proceed, check with your system administrator or system programmer.

As for the first option, **DO NOT ATTEMPT TO ERASE ANY FILE ON RSCS's 191 DISK UNLESS YOU ARE ABSOLUTELY CERTAIN YOU KNOW WHAT YOU ARE DOING.** Any file you erase must be one that is not needed. If you are not certain about this, do nothing, but call your IBM system engineer.

To erase any unneeded files from the RSCS 191 disk, type the following commands on the command line, pressing the **PF5** key after each. Note that in these commands, you must substitute the mode of the disk for the letter "m."

```
ACCESS 202 m
FLIST * * m
```

This will give you access to the disk and a list of all the files on it. Scan the list, looking for one or two files **that are no longer needed.** Carefully examine the files you choose to be certain they are not important. Under no circumstances erase any file named **RSCS DIRECT** or **PROFILE RSCS**. Type

```
ERASE
```

next to the file ids of one or two files in the list you want erased. Then, press the **ENTER** key.

RSC011-Route _____ to _____ already exists.

Explanation: Your task is to add a route to the RSCS directory. In doing so you define an indirect path that information will travel from your system to another. By "indirect" is meant that the path passes through one or more other systems before it reaches its final destination. Information about this route or path is kept in the RSCS directory for your system.

The route you just tried to define already exists, so there is no reason to define it again.

System Response: None.

Your Response: None.

RSC012-Link _____ does not exist. Cannot add route _____.

Explanation: Your task is to add a route to the RSCS directory. In doing this you define an indirect path that information will travel from your system to another. By "indirect" is meant that the path passes through one or more other systems before it reaches its final destination. Information about this route or path is kept in the RSCS directory for your system.

In order to define a route, the link from your system to the next system on the indirect path must be defined in the RSCS directory for your system. But, the link you mentioned is not defined there. You may have made a typing error.

System Response: The system could do nothing. Nothing has changed.

Your Response: Check to be certain that you spelled the link id correctly. If not, retype it, then press the **ENTER** key.

You may, of course, define the route over a link that already exists.

Otherwise, you will have to define the link that you just tried to use, then define the route over that link. To do this, go to the panel titled ADD A LINK TO THE RSCS DIRECTORY. Choose the task that will add a link to the next system on the route. Follow the directions you are given and make a note of the link id you choose. Then, return to the panel titled ADD A ROUTE TO THE RSCS DIRECTORY. Type the node id of the system you are trying to reach indirectly on the line marked **The route:** and the link id of the link you just defined on the line marked **The linkid:**. Then, press the **ENTER** key.

RSC013-The route and the link id cannot be the same.

Explanation: Your task is to add a route to the RSCS directory. In doing this you define an indirect path that information will travel from your system to another. By "indirect" is meant that the path passes through one or more other systems before it reaches its final destination. Information about this route or path is kept in the RSCS directory for your system.

You typed the same thing on the lines marked **The route:** and **The linkid:**. You cannot do this, since they refer to two different things. The route is the one to eight character node id referring to the system at the end of the indirect path. The link id is the one to eight character id of the link from your system to the next system on the route.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Type the node id of the system that is at the end of the route on the line marked **The route:**. Then, type the link id of the link that connects your system with the next system on the route on the line marked **The linkid:**. Then, press the **ENTER** key.

RSC014-Route _____ does not exist.

Explanation: Your task is to delete a route from the RSCS directory. The route name you gave refers to a route that does not exist. The route name should be the node id of the system at the end of the route. You may have made a spelling error.

System Response: No route was deleted. Nothing has changed.

Your Response: Check to see if you spelled the name of the route correctly. If the error is obvious, fix it. Then, press the **ENTER** key.

If you are not certain of the name of the route, and you need a list of them, type

X

next to the line marked **Display routes first?** and press the **ENTER** key. Find the name of the route you want to delete on the list and note its correct spelling. Return to the panel titled DELETE A ROUTE FROM RSCS DIRECTORY. Type the route name on the panel, then press the **ENTER** key.

RSC016-Route _____ deleted from RSCS directory.

> *Explanation:* This message lets you know that the route mentioned has been deleted from the RSCS directory. This route should no longer be used to transmit information.
>
> *System Response:* None.
>
> *Your Response:* None.

RSC017-Link _____ has been defined.

> *Explanation:* This message lets you know that the link mentioned is now defined in the RSCS directory, and is ready for use.
>
> *System Response:* None.
>
> *Your Response:* None.

RSC018-The system has given the DELETE command for link _____ .

> *Explanation:* This message lets you know that the link mentioned has been deleted, but of course only if it existed in the first place. It should no longer be used to transmit information.
>
> *System Response:* None.
>
> *Your Response:* None.

RSC019-Link _____ does not exist.

> *Explanation:* Your task is to delete a communication link between your system and another system. The link id that you gave refers to a link that does not exist. You probably made a spelling error.
>
> *System Response:* No link was deleted. Nothing has changed.
>
> *Your Response:* Check to be certain you spelled the link id correctly. If the error is obvious, fix it.
>
> If you are not sure of the correct spelling of the link id, type
>
> X

next to the line marked **Display links first?**, then press the **ENTER** key. Find the link you want to delete on the list you are given and make a note of its link id. Return to the panel titled DELETE A LINK FROM RSCS. Type the link id on the panel and press the **ENTER** key.

RSC020-Route _____ using link _____ has been added.

>*Explanation:* This message lets you know that the route mentioned has been added to the RSCS directory and is now ready for use.
>
>*System Response:* None.
>
>*Your Response:* None.

RSC021-Give both the route and the link id.

>*Explanation:* Your task is to add a route to the RSCS directory. In doing so, you define an indirect path that information can travel between your system and another within the network. By "indirect" is meant that the path passes through one or more other systems in the network before it reaches its final destination.
>
>To define this indirect path or route, two items are required.
>
>1. The route, which is the one to eight character node id referring to the system at the end of the indirect path.
>
>2. The link id, which is the one to eight character identifier of the link between **your** system and the **next** system on the indirect path.
>
>You did not give one or both of these items.
>
>*System Response:* The system is waiting for you to complete the panel correctly. Nothing has changed.
>
>*Your Response:* Type the node id of the system at the end of the route on the line marked **The route:**. Type the link id of the link between your system and the next system on the route on the line marked **The linkid:**. Then, press the **ENTER** key.

RSC022-The local name has been changed to _____ .

>*Explanation:* This message lets you know that the name by which your system is known within the communications network has been changed. The new name is mentioned in the message.
>
>*System Response:* None.
>
>*Your Response:* None.

RSC023-Type a new local name for the system.

> *Explanation:* Your task is to choose a new local name for your system. This name is the name by which your system will be known within the communication network. Apparently you pressed the ENTER key before typing this name.
>
> *System Response:* The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:* Select a name of from one to eight letters and/or numbers. Type it on the line marked **The new local name:**, then press the **ENTER** key.

RSC024-Type the address of the communications port.

> *Explanation:* Your task is to define the characteristics of a communications link between your system and another in the network. One of the required characteristics is the virtual address of the communications port that will be used to transmit information between the two systems. You did not give this address.
>
> *System Response:* The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:* The address of the communications port must be a hexadecimal number from **2** to **5FF**. Type your choice on the line marked **The address:**, and press the **ENTER** key.

RSC025-Communications port address must be from 2 to 5FF.

> *Explanation:* Your task is to define the characteristics of the communications link between your system and another in the network. One of the required characteristics is the virtual address of the communications port that will be used to transmit information between the two systems. The address that you gave was not valid.
>
> *System Response:* The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:* The virtual address of the communications port must be a hexadecimal number from **2** to **5FF**. Type your choice on the line marked **The address:**, and press the **ENTER** key.

RSC026-Partial nodal resistance must be from 2 to 2000.

> *Explanation:* Your task is to define a communication link between your system and an MVS system. PARTIAL NODAL RESISTANCE refers to the resistance of the node, or individual system in the network, to the flow of information through it. It is expressed as a number from 2 to 2000. The higher this number, the greater the resistance. The PARTIAL NODAL RESISTANCE that you typed may have been a number less than 2, a number greater than 2000, or not a number at all.
>
> *System Response:* The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: On the line marked **Partial nodal resistance:** type a number from **2** to **2000**, then press the **ENTER** key.

RSC027-The system has given the START command for link _____ .

Explanation: This message lets you know that the link you mentioned is being started or activated, provided of course that the link id you gave is valid and does not refer to a link that already exists.

System Response: The system will continue this task until it is finished, or until an error is made.

Your Response: Unless you receive a message from RSCS stating otherwise, you may assume the link is ready for use after a few moments..

RSC028-The system has given the STOP command for link _____ .

Explanation: This message lets you know that the link mentioned is being stopped, or deactivated, provided of course that it exists.

System Response: The system will deactivate the link immediately if the link is not processing a file at the moment. If it is, the link will be allowed to complete the processing of the file first, then the system will deactivate the link.

Your Response: None.

RSC029-RSCS system is being restarted.

Explanation: This message lets you know that the virtual machine containing your RSCS system is being restarted.

System Response: The system will continue with the task until it is finished.

Your Response: None.

RSC030-Link _____ cannot be started.

Explanation: Your task is to start an RSCS link. The link mentioned in the message cannot be started because it is not listed in the PROFILE EXEC for the RSCS virtual machine. This suggests that you did not use any of the panels when you added the link (that is, when you defined it), but instead used command mode. In such a case, the link may be listed only in the RSCS directory instead of in both the directory and the RSCS PROFILE EXEC, as it should be.

It may also be that the link is listed in neither place, and therefore does not exist at all.

System Response: The system could not start the link you mentioned. Nothing has changed.

Your Response: First, be certain that you spelled the link id correctly. If the error is obvious, fix it. If not, type

    X

on the line marked **Display the links first?**, then press the **ENTER** key. This will give you a list of all of the system's links.

If you see that you typed the link id incorrectly, go back to the last panel, type it correctly and press the **ENTER** key.

If you find that the link id is listed and you spelled it correctly, then it means the link is only listed in the directory and not in the PROFILE EXEC for RSCS. To remedy this you must delete this link from the RSCS directory, then add this link to the RSCS directory and to the PROFILE EXEC.

To do this, go to the panel titled DELETE A LINK FROM RSCS. Type the link id involved in your task, then press the **ENTER** key. Then, go to one of the following panels, depending upon the type of link involved.

LINK TO A VM SYSTEM USING BSC
LINK TO A VM SYSTEM USING CTCA
LINK TO AN MVS SYSTEM OR VSE/POWER VERSION 2
LINK TO A VSE/POWER VERSION 1
LINK TO A 3270 INFORMATION DISPLAY SYSTEM PRINTER
LINK TO A NONPROGRAMMABLE TERMINAL
LINK TO A PROGRAMMABLE REMOTE STATION

Complete the panel according to the directions, using the same link id as you deleted above. Then, press the **ENTER** key.

If you find the link does not exist at all, then simply define it using the appropriate panel in the list above.

Return to the panel titled START AN RSCS LINK and continue with your original task.

RSC031-Lines per page must be from 0 to 99.

Explanation: Your task is to set up a link between your system and a 3270 Information Display System printer. One of the options you have is to specify the number of lines the printer will put on each page. The number you typed for this was a number less than 0, greater than 99, or not a number at all.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: If you leave the line marked **Lines per page (0-99):** blank, 66 lines will be printed on each page. If you want to specify the number of lines per page, type a number from **0** to **99** on this line. Then, press the **ENTER** key.

RSC032-Choose only one item, as instructed.

Explanation: The panel you are working on instructed you to choose only one item in a list. You chose more than one item.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Read the instructions on the panel carefully. According to the directions, select only one item in a list.

RSC033-Select one SML mode at the bottom of the panel.

Explanation: Your task is to define a link between your system and a programmable remote station. You did not select one of the SML modes at the bottom of the panel. This is required.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Select the appropriate mode for your task.

If you select one of the first two modes (Hrn or Rrn), type a number from **0** to **99** on the line next to this mode. This number indicates the remote system number the system will be known by within the programmable remote station.

If you select the third mode (Arn), type the five character remote system name that your system is to be known by within the programmable remote station. This name may be composed of letters of the alphabet and/or numbers, and is typed on the line next to the third mode.

If you select the the fourth mode (Mrn), type a number from **0** to **99** on the line next to this mode. This number indicates the remote system number your system will be known by within the programmable remote station.

When you have completed the panel correctly, press the **ENTER** key.

RSC034-The buffer size must be from 0 to 1017.

Explanation: Your task is to define a link between your system and another in the network. This link must have a buffer of a certain size, which you define to be from 0 to 1017 bytes. The buffer size you gave was a number less than 0, a number greater than 1017, or not a number at all.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Select a buffer size from **0** to **1017**. Type your choice on the line marked **The buffer size:**. If you leave the line blank, the buffer size will be 400 by default. Now, press the **ENTER** key.

RSC035-Another link has this address. Choose another.

> *Explanation:* Your task is to define a link between your system and another. The address of this link refers to the virtual address of the communications port that will be used to transmit information between the two systems. The address you gave is one that is already being used by another link. You must choose another address.
>
> *System Response:* The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:* Valid communications port addresses are hexadecimal numbers from **2** to **5FF**. To find which of these addresses are currently being used by other links, go to the panel titled DISPLAY THE STATUS OF YOUR RSCS SYSTEM, and select task number 4. The addresses currently in use will be displayed at the end of each line you see.
>
> Choose a valid address other than one in use right now. Return to the panel you were just working on and type it on the line marked **The address:**. Then, press the **ENTER** key.

RSC036-CPU id number must be from 1 to 200.

> *Explanation:* Your task is to define a link between your system and a VSE/POWER system. You give your own RSCS virtual machine a CPU id, which the other system uses to identify yours. What you gave as the CPU id was either a number less than 1, a number greater than 200, or not a number at all.
>
> *System Response:* The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:* Select a number from **1** to **200** and type it on the line marked **The remote CPUID number:**. If you leave the line blank, the system will select **1** as the CPU id number for you. Now, press the **ENTER** key.

RSC037-The spool id must be a four digit number.

> *Explanation:* Your task is to get certain information about a file. In order to give you this information, the system needs to know the file's spool id number. This is a four digit number the system gives to each file being transmitted so it can easily be identified. The spool id you gave contained characters that were not numbers.
>
> *System Response:* The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:* Type the spool id on the panel titled DISPLAY INFORMATION ABOUT A FILE. If you are not sure of the file's spool id, go to the panel titled DISPLAY THE STATUS OF A LINK ID. Complete the panel, choosing the the the option marked **Active file information**. This will give you a list of, among other things, the spool ids of the active spool files on that link.

RSC038-The buffer size must be from 300 to 3976.

> *Explanation:* Your task is to define a link between your system and an MVS system. Part of this link contains a buffer whose size you must define. You typed something for the buffer size that was a number less than 300, a number greater than 3976, or not a number at all.
>
> *System Response:* The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:* Select a buffer size from **300** bytes to **3976** bytes and type it on the line marked **The buffer size:**. If you leave this line blank, then the buffer size will be 400 by default. Now, press the **ENTER** key.

RSC039-Route _____ already exists via another path.

> *Explanation:* Your task is to add a route to the RSCS directory. In doing so, you define an indirect path that information can travel between your system and another within the network. By "indirect" is meant that the path passes through one or more other systems in the network before it reaches its final destination.
>
> A route to the system whose name you typed on the line marked **The route:** already exists and travels over at least one different link. You cannot define more than one route to the same destination, whether over exactly the same links or not.
>
> *System Response:* No other route was defined. Nothing has changed.
>
> *Your Response:* To confirm that the route to the other system you named exists, go to the panel titled DISPLAY THE STATUS OF YOUR RSCS SYSTEM and select task number 7. If the route mentioned in the message is on the list you receive, then it does indeed exist, and you need not define another route to the same destination. Just make use of the existing route.

RSC040-Directory statement missing. You must restart RSCS.

> *Explanation:* There were one or two critical statements missing from the RSCS directory when you began to use RSCS. They were the AUTHORIZATION statements that allow the system administrator and the operator certain authority over RSCS. RSCS will not function without the information these statements provide. So, when the system saw that the statements were missing, it put them back in the directory. However, they will not be effective until you restart RSCS.
>
> *System Response:* The system is waiting for you to restart RSCS.
>
> *Your Response:* To restart RSCS, type
>
> ```
> FORCE RSCS
> ```
>
> on the panel's command line and press the **PF5** key. Then type
>
> ```
> AUTOLOG RSCS p
> ```
>
> substituting the log on password to the RSCS virtual machine for the letter "p." Then, press the **PF5** key.

RSC041–Directory statement missing. Restart RSCS.

Explanation: An RSCS dump is a recording of the contents of the RSCS virtual machine at the moment of malfunction. The DUMP statement in the RSCS directory tells the system how to record a dump, should malfunction occur. This DUMP statement was missing from the directory when you began using RSCS. When the system noticed this, it put the DUMP statement back in the directory. However, the statement will not be effective until you restart RSCS. It would be wise to do so, though this is not required. If you do not, and RSCS malfunctions, no dump will be recorded for you.

System Response: None.

Your Response: To restart RSCS, type

```
FORCE RSCS
```

on the panel's command line and press the **PF5** key. Then type

```
AUTOLOG RSCS p
```

substituting the log on password for the RSCS virtual machine for the letter "p." Then, press the **PF5** key.

RSC042–Directory statement missing. Restart RSCS.

Explanation: The MSGNOH (MESSAGE NO HEADER) statement was missing from the RSCS directory when you began using RSCS. Each time RSCS sends a message to a user it includes the name of each system in the network the message had to pass through to reach its destination. This can result in very long messages. The MSGNOH statement tells RSCS to omit all this extra information. When the system saw this statement was missing, it put the statement back in the directory. However, the statement will not be effective until RSCS is restarted. It would be wise to do so, though this is not required.

System Response: None.

Your Response: To restart RSCS, type

```
FORCE RSCS
```

on the panel's command line and press the **PF5** key. Then type

```
AUTOLOG RSCS p
```

substituting the log on password for the RSCS virtual machine for the letter "p." Then, press the **PF5** key.

RSC043-Directory statements missing. Restart RSCS.

Explanation: Two statements were missing from the RSCS directory when RSCS was started. They were the MSGNOH statement and the DUMP statement. (For an explanation of what these statements do, see messages RSC041 and RSC042 above.) When the system noticed this, the two statements were put back in the directory. However, neither statement will be effective until you restart RSCS. It would be wise to do so, though this is not required.

System Response: None.

Your Response: To restart RSCS, type

```
FORCE RSCS
```

on the panel's command line and press the **PF5** key. Then type

```
AUTOLOG RSCS p
```

substituting the log on password for the RSCS virtual machine for the letter "p." Then, press the **PF5** key.

RSC044-Directory statements missing. You must restart RSCS.

Explanation: Three statements were missing from the RSCS directory when you started using RSCS. They were the two AUTHORIZATION statements and the DUMP statement. (For an explanation of what these statements do, see messages RSC040 and RSC041 above.) When the system noticed this, the statements were put back in the directory. However, none of the statements will be effective until you restart RSCS.

Since RSCS cannot function without the AUTHORIZATION statements, you must restart RSCS.

System Response: None.

Your Response: To restart RSCS, type

```
FORCE RSCS
```

on the panel's command line and press the **PF5** key. Then type

```
AUTOLOG RSCS p
```

substituting the log on password for the RSCS virtual machine for the letter "p." Then, press the **PF5** key.

RSC045-Directory statements missing. You must restart RSCS.

> *Explanation:* Three statements were missing from the RSCS directory when RSCS was started. They were the AUTHORIZATION statements and the MSGNOH statement. (For an explanation of what these statements do, see messages RSC040 and RSC042 above.) When the system noticed this, the statements were put back in the directory. However, none of the statements will be effective until you restart RSCS.
>
> Since RSCS cannot function without the AUTHORIZATION statements, you must restart RSCS.
>
> *System Response:* None.
>
> *Your Response:* To restart RSCS, type
>
> ```
> FORCE RSCS
> ```
>
> on the panel's command line and press the **PF5** key. Then type
>
> ```
> AUTOLOG RSCS p
> ```
>
> substituting the log on password for the RSCS virtual machine for the letter "p." Then, press the **PF5** key.

RSC046-Directory statements missing. You must restart RSCS.

> *Explanation:* Certain statements were missing from the RSCS directory when RSCS was started. They were the AUTHORIZATION statements, the DUMP statement, and the MSGNOH statement. (For an explanation of what these statements do, see messages RSC040, RSC041, and RSC042 above.) When the system noticed this, the statements were put back in the directory. However, none of the statements will be effective until you restart RSCS.
>
> Since RSCS cannot function without the AUTHORIZATION statements, you must restart RSCS.
>
> *System Response:* None.
>
> *Your Response:* To restart RSCS, type
>
> ```
> FORCE RSCS
> ```
>
> on the panel's command line and press the **PF5** key. Then type
>
> ```
> AUTOLOG RSCS p
> ```
>
> substituting the log on password for the RSCS virtual machine for the letter "p." Then, press the **PF5** key.

RSC047–Select at least one item from the list above.

Explanation: Your task is to obtain certain information on the status of some remote system. You identified the remote system, but you did not mention what information you need about this system.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Notice that the panel lists several topics on which you can obtain information. Type

    X

on the line next to as many of these topics as you wish. Then, press the **ENTER** key.

RSC048–Link to RSCS's 191 disk as your 202 disk.

Explanation: To perform any task involving RSCS, your virtual machine must have link access to the disk at address 191 in the RSCS virtual machine. That is, each time you log on this disk must become a part of your virtual machine as well. In addition, it must be assigned to address 202 in your virtual machine. You do not have link access to this disk.

System Response: None.

Your Response: To see that you are given automatic link access to this disk each time you log on in the future, go to the menu panel titled QUERY OR CHANGE STATUS and choose task number 4. Then choose task number 5 on the panel titled UPDATE YOUR DIRECTORY. Complete the panel titled AUTOMATIC LINK AT LOGON, using the following values.

    Userid: RSCS
    Address: 191
    Your address: 202
    Access mode: RR
    Password: (type the READ password to RSCS's 191 disk)

Press the **ENTER** key.

This automatic link access will not take effect until after the system is re-started. In the meantime, to gain access to this disk, type the following command on the panel's command line, and press the **PF5** key. Note that in this command you must substitute for the letter "p," the READ password to RSCS's 191 disk.

    LINK TO RSCS 191 AS 202 RR PASS= p

RSC049–MAINT must have WRITE access to RSCS's 191 disk.

Explanation: Your task involves adding or deleting an RSCS link or route; or you may be trying to change the name of your RSCS system. To do so, MAINT must have access to the disk at address 191 in the RSCS virtual machine. That is, this disk must also be a part of the MAINT virtual machine. In addition, MAINT must have MULTI-WRITE access to this disk.

For some reason, MAINT does not have MULTI-WRITE access to the RSCS 191 disk.

System Response: The system could not perform your task.

Your Response: First, find out what the MULTI access password to RSCS's 191 disk is. To give MAINT the proper access to this disk, type the following command. Note that you must substitute for the letter "p" the MULTI access password for RSCS's 191 disk.

```
LINK RSCS 191 202 MW PASS= p
```

Press the **PF5** key.

System Support

SYS002–Addressed minidisk _____ does not exist.

> *Explanation:*   The minidisk you specified does not exist. The address of the minidisk is what your system uses to find the disk you want to use. You may simply have made a typing error.
>
> *System Response:*   The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:*   Carefully check the spelling of the address of the minidisk you want to work with. Complete the panel again and then press the **ENTER** key.

SYS012–The link password was incorrect.

> *Explanation:*   The password you specified is incorrect. The password is needed to link you to the MAINT 300 minidisk. You may simply have made a typing error.
>
> *System Response:*   None.
>
> *Your Response:*   You must make your selection again and then press the **ENTER** key.

SYS021–Tape rewind was unsuccessful.

> *Explanation:*   The system tried to rewind the tape and was not able to. The tape may have become detached or when it was unloaded and rewound it came off the tape drive.
>
> *System Response:*   When the system noticed the error the task was halted. Nothing has changed.
>
> *Your Response:*   You need to check with your system programmer to find out what caused the tape rewind to fail. Once he has corrected the error, complete the panel again and press the ENTER key.

SYS022–No temporary disk space available.

> *Explanation:*   There is no temporary disk space available to carry out this function. More than likely someone else is using the temporary space normally available to you. You will not be able to continue with this task until you have temporary disk space to work with.
>
> *System Response:*   None.
>
> *Your Response:*   You have to wait until there is temporary space to work with to continue this task. Contact your system programmer to let him know you need

temporary space. He can issue a message to other users to release any temporary disks that they are not using. Once there is temporary disk space available, return to the task panel, complete it and press the ENTER key.

SYS026-Device address _____ is not a tape.

Explanation: The device address you specified is not a tape address. The address is what your system uses to find the tape you want to work with. You may simply have made a typing error.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Carefully check your spelling and complete the panel again and then press the **ENTER** key.

SYS028-No selection was made.

Explanation: You did not make any selections.

System Response: None.

Your Response: If you want to continue with this task, complete the panel again and then press the **ENTER** key. When the list is displayed, make your selections again. Type any character next to the product(s) you want apply service to.

SYS031-Device address _____ is not a DASD.

Explanation: The address you specified is not for a DASD. You may simply have made a typing error.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Carefully check the spelling of the address of the DASD you want to use. Complete the panel again and then press the ENTER key.

SYS040-Both the YES and NO fields were blank.

Explanation: You did not type an "X" next to Yes or No. You must make a selection of one or the other.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Carefully complete the panel again. Make sure you type an "X" next to Yes or No, then press the **ENTER** key.

SYS041-Both the YES and NO fields were chosen.

Explanation: You typed an "X" next to **both** Yes and No at the same time, and this cannot be done.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Carefully complete the panel again. Make sure you type an "X" next to Yes or No but not **both**, then press the **ENTER** key.

SYS042-Unsuccessful link to MAINT 300 minidisk.

Explanation: An error within VM/SP is preventing the link to the MAINT 300 minidisk to occur.

System Response: When your system noticed the error, the task was halted. Nothing has changed.

Your Response: Check with your system programmer about this error. Complete the panel again and then press the **ENTER** key.

SYS060-Conflicting options ... retry.

Explanation: You have chosen an option that conflicts with your other options. You have chosen to apply service to **both** CP and CMS at the same time. You may not do this.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Complete the panel again. Specify either CP or CMS service but not **both** at the same time and then press the **ENTER** key.

SYS061-Incorrect tape mounted.

Explanation: You specified the incorrect tape to be mounted.

System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

Your Response: Carefully check your spelling and complete the panel again, then press the **ENTER** key.

SYS062-Processing complete ... end of job.

        Explanation: This task has been completed.

        System Response: None.

        Your Response: None.

SYS063-Segment name _____ has been restored.

        Explanation: The segment name you chose has been restored.

        System Response: None.

        Your Response: None.

SYS065-Unsuccessful accessing _____ as _____.

        Explanation: The disk you specified could not be successfully accessed.

        System Response: When your system noticed the error, it stopped carrying out the access. Nothing has changed.

        Your Response: Check with your system programmer about this error. Complete the panel again and then press the **ENTER** key.

SYS069-Tape mounted is not a PUT tape.

        Explanation: The tape you specified to be mounted is not a PUT tape; therefore, service cannot continue.

        System Response: The system is waiting for you to complete the panel correctly. Nothing has changed.

        Your Response: Have a correct PUT tape mounted. Complete the panel correctly, then press the **ENTER** key.

SYS070-Unsuccessful loading service.

        Explanation: An error occurred while loading service. This may be because the specified tape is not a PUT tape, the tape may be bad, or there was a bad return code from VMSERV.

        System Response: None.

        Your Response: First, try the task again using a different PUT tape. If the task is still unsuccessful, then you there is an error in the VMSERV exec. You will have to check with your system programmer about this error. Now, complete the panel again and then press the **ENTER** key.

SYS072-Unsuccessful attaching device _____ as 181.

Explanation: The device you specified could not be attached as your 181.

System Response: When your system noticed the error, the task was halted. Nothing has changed.

Your Response: Carefully complete the panel again and then press the **ENTER** key.

SYS074-Function complete.

Explanation: The specified task is now complete.

System Response: None.

Your Response: None.

SYS076-Build and load CP failed.

Explanation: The build and load of the CP nucleus did not execute properly.

System Response: When your system noticed the error the task was halted. Nothing has changed.

Your Response: You can refer to the *VM/SP Installation Guide*, to try to determine why the build and load was unsuccessful. The exec being used by the system is **Generate**. If you can correct the error yourself do so; otherwise, check with your system programmer for assistance. Complete the panel again and press the ENTER key.

SYS077-Build and load CMS failed.

Explanation: The build and load of the CMS nucleus did not execute properly.

System Response: When your system noticed the error the task was halted. Nothing has changed.

Your Response: You can refer to the *VM/SP Installation Guide*, to try to determine why the build and load was unsuccessful. The exec being used by the system is **Generate**. If you can correct the error yourself do so; otherwise, check with your system programmer for assistance. Complete the panel again and press the ENTER key.

SYS078–Unsuccessful reading the CP load map.

> *Explanation:* The CP load map was unsuccessfully read from your reader.
>
> *System Response:* When your system noticed the error the task was halted. Nothing has changed.
>
> *Your Response:* You can refer to the *VM/SP Installation Guide*, to try to determine why the system was unsuccessful reading the CP load map. The exec being used by the system is **Generate**. If you can correct the error yourself do so; otherwise, check with your system programmer for assistance. Complete the panel again and press the ENTER key.

SYS079–Unsuccessful reading the CMS load map.

> *Explanation:* The CMS load map was unsuccessfully read from your reader.
>
> *System Response:* When your system noticed the error the task was halted. Nothing has changed.
>
> *Your Response:* You can refer to the *VM/SP Installation Guide*, to try to determine why the system was unsuccessful reading the CMS load map. The exec being used by the system is **Generate**. If you can correct the error yourself do so; otherwise, check with your system programmer for assistance. Complete the panel again and press the ENTER key.

SYS081–Storage for segments too small.

> *Explanation:* There is not enough virtual storage to save the segments. The function is not complete.
>
> *System Response:* The system is waiting until such time when there is enough storage to save the segments. Nothing has changed.
>
> *Your Response:* Redefine storage and try again. To redefine storage, use the command
>
> ```
> DEFINE STOR xM
> ```
>
> where x is a multiple of M=1024K. Usually the system tells you how much storage you need. If the system does not tell you how much storage you need, check with your system programmer about it.
>
> Once you redefine storage you will have to re-IPL your own VM system. This IPL will cause you to leave the IPF environment. You will have to reenter IPF, return to the Service, Refresh, or Tailor CP and CMS panel (100$4), select option 8 (Read CMS load map from your reader (and save CMS segments)) and press the ENTER key.

SYS082-File _____ _____ _____ **not found.**

> *Explanation:* The file you specified could not be found. Either the file is not available or you may simply have made a typing error.
>
> *System Response:* The system is waiting for you to specify a correct file. Nothing has changed.
>
> *Your Response:* Check your spelling and complete the panel again and then press the **ENTER** key.

SYS083-Complete all of the entry areas.

> *Explanation:* You must complete all the entry areas.
>
> *System Response:* The system is waiting for you to complete the panel correctly. Nothing has changed.
>
> *Your Response:* Carefully check your spelling and complete all entry areas. Complete the panel again and then press the **ENTER** key.

SYS084-Return code from _____ **is** _____ **.**

> *Explanation:* The return code is what your system uses to identify what caused the error.
>
> *System Response:* None.
>
> *Your Response:* You need to refer to related documentation. For information on the use of DCSSRSAV you can do any of the following:
>
> 1. Refer to "DCSSRSAV" on page 185.
>
> 2. Link to the 3A0 disk and xedit the file called: IPF DTRREF.
>
> 3. Use the End User dialog of VM/IPF to get online information. Online information is an option on a panel titled: User Assistance. The document you would refer to is called "IPF Module/EXEC Guide."
>
> For information about VMFMAC, VMFASM, or VMFPLC2, refer to the following:
>
> *VM/SP Planning and System Generation Guide*
>
> For information about GENSIPOE, refer to the following:
>
> GENSIPOE exec
>
> If you are able to correct the error yourself do so; otherwise, consult your system programmer for help. Complete the panel again and then press the **ENTER** key.

There is not enough temporary disk space available to run this procedure. You may find out who is presently using temporary disk space by using the command:

  CP QUERY TD

QUERY TD is a class B command. If you get the message 'DMKCQG045E TD NOT LOGGED ON,' you do not have class B privilege. In this case, ask the operator to issue the command for you. You may release a temporary disk by using the command:

  CP DETACH addr

where 'addr' is the three digit address displayed from the QUERY command. After freeing up temporary disk space, come back and try again.

Your tape is an incorrect tape. It does not contain the EP/VS Assembler, IPO/E Feature 5744AN1. Mount the correct tape and start again when ready.

Your disk does not contain the EP/VS Assembler, IPO/E Feature 5744AN1. Make sure that you have formatted the disk and installed EP/VS correctly.

PLEASE ENTER THE RSCS 191 DISK 'READ' PASSWORD

Installation Messages

This section will explain the meaning and significance of the messages generated from the installation execs, the action the system will take, and what action will be required from you.

Each message generated by the exec is in the format FMTxxxy, where:

xxx is the message number
y is the message type.

The following are valid values for y, and their meaning:

I   This is an informational message to let you know what the exec is doing for you. No response is required from you.

W This is a warning message. Since you will be required to take some action when the installation is complete, you should make note of these types of messages.

E   This is an error message telling you that an unrecoverable error has occurred. This situation will occur when you did not set up your system as described in "Chapter 2. Planning" on page 4Execution of the exec is terminated and you will have to restart the installation when you have corrected the problem(s).

FMT001I * INFORMATION *** Linking to _____ _____ disk.**

> *Explanation:* An attempt is being made to link and access the specified disk. This disk is required to be linked and accessed before the VM/IPF release 5 files are loaded from tape.
>
> *System Response:* An attempt is made to link and access the specified disk.
>
> *Your Response:* None.

FMT002I * INFORMATION *** Loading files to _____ _____ disk.**

> *Explanation:* The VM/IPF release 5 files are being loaded from the tape to the specified disk.
>
> *System Response:* An attempt is made to load the files to the specified disk.
>
> *Your Response:* None.

FMT003I * INFORMATION *** Erasing _____ files from disks _____ _____ .....**

> *Explanation:* The IPF release 4 or IPF release 5 files are being erased from the specified disk.
>
> *System Response:* If IPF release 4 was previously installed, then the IPF release 4 files are erased from MAINT 19E and 300 disks. If IPF release 5 was previously installed then the VM/IPF release 5 files are erased from MAINT 19E, 300, 310, and CPRM 291 disks.
>
> *Your Response:* None.

FMT004E * ERROR *** An error occurred loading files to the _____ _____ disk. Correct the problem and restart the VM/IPF release 5 Installation exec. The return code from VMFPLC2 was _____.**

> *Explanation:* An error occurred loading the VM/IPF release 5 files to the specified disk.
>
> *System Response:* The tape is positioned at the end of the VM/IPF release 5 product and execution of the installation exec is terminated.
>
> *Your Response:* You must correct the problem that caused the error to occur and then restart Stage 1 of the installation procedure. For information on the return codes from the VMFPLC2 command refer to TAPE command return codes in the *VM/SP CMS Command and Macro Reference*.

FMT005W * WARNING *** The VM/IPF release 5 User's Guide was not loaded to MAINT 3A0. The return code from VMFPLC2 was _____.**

> ***Explanation:*** An error occurred loading the IPF Module and EXEC Guide (IPF DTRREF) to MAINT's 3A0 disk. This error will not affect the installation; however, it will affect the running of the Online Information dialogs for VM/IPF release 5.
>
> ***System Response:*** The tape is positioned to the next logical file on the tape and execution of the installation exec continues.
>
> ***Your Response:*** No immediate response is required by you. When the installation completes, you may choose to try and load the IPF Module and EXEC Guide again. For more information on return codes from the VMFPLC2 command refer to TAPE command return codes in the *VM/SP CMS Command and Macro Reference*. To do this correct the problem that caused the error to occur and then do the following steps:
>
> 1. Log on to MAINT (if you are not already)
>
> 2. Mount and ready the VM/IPF release 5 product tape on a tape drive.
>
> 3. Issue the following commands:
>
>     ```
>     ATTach cuu * 181 (where cuu is the tape address)
>
>     VMFPLC2 SCAN 15748MS1 EXEC (EOT
>
>     VMFPLC2 FSF 7
>
>     ACCess 3A0 G
>
>     VMFPLC2 LOAD * * G (EOF 1
>     ```

FMT006W * WARNING *** VM/IPF release 5 Teachware was not loaded to IIPS 193. The return code from VMFPLC2 was _____.**

> ***Explanation:*** An error occurred loading the VM/IPF release 5 TEACHWARE to IIPS 193 disk. This error will not affect the installation; however, it will affect the running of the Online Information dialogs for VM/IPF release 5.
>
> ***System Response:*** The tape is positioned to the next logical file on the tape and execution of the installation exec continues.
>
> ***Your Response:*** No immediate response is required by you. When the installation completes, you may choose to try and load the VM/IPF release 5 TEACHWARE again. To do this correct the problem that caused the error to occur and then do the following steps:
>
> 1. Log on to MAINT (if you are not already)
>
> 2. Mount and ready the VM/IPF release 5 product tape.
>
> 3. Issue the following commands:

```
ATTach cuu *  181 (where cuu is the tape address)

VMFPLC2 SCAN 15748MS1 EXEC (EOT

VMFPLC2 FSF 8

ACCess 493 0

VMFPLC2 LOAD * * 0 (EOF 1
```

FMT007W ** WARNING *** IIPS 193 disk not available. The VM/IPF release 5 Teachware will not be loaded.**

Explanation: The IIPS 193 disk could not be linked and accessed. This error will not affect the installation; however, it will affect the running of the Online Information dialogs for VM/IPF release 5.

System Response: The tape is positioned to the next logical file on the tape and execution of the installation exec continues.

Your Response: No immediate response is required by you. When the installation completes, you may choose to try and load the VM/IPF release 5 TEACHWARE again. Verify that the IIPS 193 disk exists in the DIRECTORY and that it has been formatted.

1. Log on to MAINT (if you are not already)

2. Mount the VM/IPF release 5 product tape on a tape drive.

3. Issue the following commands:

```
ATTach cuu *  181 (where cuu is the tape drive address)

VMFPLC2 SCAN 15748MS1 EXEC (EOT

VMFPLC2 FSF 8

DETach 493

LINK IIPS 193 493 W (You will be asked to enter the write
                     access password for the IIPS 193
                     minidisk. You will have to check in
                     the directory for this password.)
ACCess 493 0

VMFPLC2 LOAD * * 0 (EOF 1
```

FMT008E * ERROR *** An error occurred positioning the tape to the end of the product.**

Explanation: An error occurred positioning the tape to the end of the VM/IPF release 5 product. This is only significant if you are using a stacked tape and expect the tape to be positioned at the beginning of the next product on the tape.

System Response: None.

Your Response: None.

FMT009I * INFORMATION *** The tape is now positioned.**

        Explanation: The tape is positioned at the end of the VM/IPF release 5 product.

        System Response: None.

        Your Response: If you are NOT using a stacked tape (a tape that contains more than one product on it), then rewind the tape. If you are using a stacked tape then you may now install the next product on the tape.

FMT010E * ERROR *** The I5748MS1 Memo was not saved.**

        Explanation: An error occurred copying the memo to MAINT's 300 disk.

        System Response: None.

        Your Response: No immediate response is required by you. When the installation completes, you may try to load the memo again by doing the following:

        1. Log on to MAINT (if you are not already)

        2. Mount the VM/IPF release 5 product tape on a tape drive.

        3. Issue the following commands:

```
                    ATTach cuu  *  181 (where cuu is the tape drive address)
                    VMFPLC2 SCAN I5748MS1 EXEC (EOT
                    VMFPLC2 FSF 1
                    ACCess 300 U
                    VMFPLC2 LOAD * * U (EOF 1
```

FMT011I * INFORMATION *** _____ _____ Disk needs to be formatted in order to continue.**

    Do you want it to be formatted?
    1. Yes
    2. No
    Enter the number corresponding to your choice.

        Explanation: The specified disk was not formatted. You can choose whether or not to have the disk formatted.

        System Response: If you chose 1, then the disk is formatted by the exec and execution of the installation exec continues. If you chose 2, then the tape is positioned to the end of the VM/IPF release 5 product and execution of the installation exec is terminated.

        Your Response: Enter 1 or 2 and press the ENTER key.

FMT012E *** ERROR *** Error occurred formatting _____ _____ disk. Correct the problem and try again. The return code from format was _____ .

> *Explanation:*   An error occurred trying to format the specified disk.
>
> *System Response:*   The tape is positioned at the end of the VM/IPF release 5 product and execution of the installation exec is terminated.
>
> *Your Response:*   Correct the problem indicated by the return code and restart the VM/IPF release 5 installation. For more information on return codes from the FORMAT command refer to *VM/SP CMS Command and Macro Reference.*

FMT013E *** ERROR *** The link to _____ _____ disk was unsuccessful, RC = _____ . The link failed because there was not an entry in the CP directory. Refer to the Directory Entries section of the VM/IPF Release 5 System Reference manual and verify that you have followed all directions.

> *Explanation:*   An error occurred linking to the specified disk.
>
> *System Response:*   The tape is positioned to the end of the VM/IPF release 5 product and execution of the installation exec is terminated.
>
> *Your Response:*   Refer to "Directory Entries" on page 16 to verify that there is an entry in the directory. Correct the problem and restart the VM/IPF release 5 installation. For more information on return codes from the LINK command refer to *VM/SP CP Command Reference for General Users* or *VM/SP System Messages and Codes.*

FMT014E *** ERROR *** _____ _____ disk was not accessed. The return code from the ACCESS command was _____ . Correct the problem and restart the VM/IPF release 5 Installation exec.

> *Explanation:*   An error occurred accessing the specified disk.
>
> *System Response:*   The tape is positioned to the end of the VM/IPF release 5 product and execution of the installation exec is terminated.
>
> *Your Response:*   Correct the problem and restart the VM/IPF release 5 installation exec. For more information on return codes from the ACCESS command refer to the *VM/SP CMS Command and Macro Reference.*

FMT015E *** ERROR *** _____ _____ disk was not formatted. Refer to the Disks Which Must Be Formatted section of the VM/IPF release 5 System Reference manual for more information on which disks must be formatted before installing VM/IPF release 5, then restart the installation exec.

> *Explanation:*   The specified disk was not formatted. This indicates that the pre-installation requirements were not met.
>
> *System Response:*   The tape is positioned to the end of the VM/IPF release 5 product and execution of the installation exec is terminated.
>
> *Your Response:*   Format the required disk and refer to "Disks Which Must be Formatted" on page 25, for information on which disks must be formatted before installing VM/IPF release 5. Verify that these disks are formatted, then restart the installation exec.

FMT016I *** INFORMATION *** The tape is being positioned to the end of the VM/IPF release 5 Product. This may take a while so be patient until you receive a message.

Explanation: The tape is being positioned to the end of the VM/IPF release 5 product. Do not try to continue until you receive another message from the system.

System Response: The tape is positioned to the end of the VM/IPF release 5 product.

Your Response: None.

FMT017I *** INFORMATION *** Copying files to _____ _____ disk.

Explanation: An attempt is being made to copy the VM/IPF release 5 files to the specified disk. The files are required on the specified disk for VM/IPF release 5 to be completely functional.

System Response: An attempt is made to copy the files.

Your Response: None.

FMT018E *** ERROR *** File _____ _____ _____ was not copied to _____ _____ disk. The return code from the COPYfile command was _____.

Explanation: An error occurred copying the specified file to the specified disk.

System Response: The installation exec continues.

Your Response: Write down the file that was not copied and the disk it was supposed to be copied to. When the installation completes, you will have to copy this file over manually. For more information on the return codes from the COPYfile command refer to *VM/SP CMS Command and Macro Reference*.

FMT019I *** INFORMATION *** File _____ _____ _____ on disk _____ _____ was renamed to _____ FMT_____ _____.

Explanation: The file on the specified disk was renamed. This is done so that the file required by VM/IPF release 5 can be copied to the disk without destroying the user's file. Take, for example, copying the VM/IPF release 5 DASD PARMS file from the MAINT 300 disk to SYSDUMP1 191. Suppose that you already have a file called DASD PARMS existing on the SYSDUMP1 191 disk which contains information you don't want to lose. The exec will rename the DASD PARMS on SYSDUMP1 191 to DASD FMTPARMS.

System Response: The installation exec continues.

Your Response: Write down the file and the disk information. After the install is complete, decide which information you want to keep from the original file and add this to the VM/IPF release 5 file. Then erase the file with the filetype beginning with FMT.

FMT020E *** ERROR *** File _____ _____ _____ on disk _____ _____ was not saved.

Explanation: An unsuccessful attempt was made to rename the user's file. Since the file has not been renamed, an error occurred when VM/IPF release 5 tried to copy the file to this disk.

System Response: The installation exec continues.

Your Response: Write down the file and disk information. When the install completes, rename the files and copy over the VM/IPF release 5 file to the specified disk.

FMT021I *** INFORMATION *** You have chosen not to install VM/IPF release 5.

Explanation: You chose not to install VM/IPF Release 5 at this time.

System Response: The tape is positioned at the end of the product and execution of the installation exec is terminated.

Your Response: None.

FMT022E *** ERROR *** You have entered the incorrect write access minidisk password. Check the password and try again. The return code from the LINK command was _____.

Explanation: The password you specified is incorrect. The password must be entered exactly as shown in the directory for each minidisk.

System Response: None.

Your Response: Check your directory for the correct password. Enter the password again and press the ENTER key.

FMT023E *** ERROR *** You have entered the incorrect write access minidisk password for the third time. This is the maximum number of times you are allowed to try to enter the correct password during the installation of this product.

Explanation: You have entered the incorrect write access minidisk password for the third time. This is the maximum number of times you are allowed to try to enter the correct password during the installation of this product.

System Response: The tape is positioned to the end of the VM/IPF release 5 product and execution of the installation exec is terminated.

Your Response: If you want to install this product you will have to start the installation process all over again. When you are asked for the write access minidisk password, check the directory entry for that specific minidisk for the correct password.

FMT024E * ERROR *** IPF could not link to _____ _____ disk in write mode. Do you wish to force the userid _____ off the system so that IPF can link to the disk in write mode (Yes/No)?**

> ***Explanation:***   IPF needs to be link to the specified disk in write mode for the installation process to continue successfully. If you force the specified user off the system, then IPF can link to the disk in write mode and the execution of the install exec can continue.
>
> ***System Response:***   The system tried to link to the specified disk in write mode.
>
> ***Your Response:***   You have two options:
>
> - If you answer Yes, then the specified userid will be forced off the system. In addition, you will again be asked for the write access password to link that userid's disk. Once you have entered the correct write access password, the execution of the installation exec continues.
> - If you answer No, then the tape is positioned to the end of the VM/IPF release 5 product and the execution of the installation exec is terminated.
>
> Decide whether or not you want to continue with the installation process and respond accordingly.

FMT025I * INFORMATION *** You chose not to force Userid _____ off the system. IPF can not be installed under the existing conditions.**

> ***Explanation:***   You chose not to force the specified userid off the system; therefore, IPF could not link to the disk in write mode. The system needs to be linked to the userid's disk in write access in order to continue the installation process.
>
> ***System Response:***   The tape is positioned at the end of the product and execution of the installation exec is terminated.
>
> ***Your Response:***   If you want to install VM/IPF release 5 successfully, you need to make sure that IPF can link to specified disks in write mode. Users will have to be forced off the system in order for IPF to link to the disks successfully. Refer to "Stage 1 - Loading VM/IPF Release 5" on page 27, to determine which disks you will prompted for the write passwords for.

7

Chapter 7. IPF Modules and Execs

This section provides a brief description of modules and execs that are used by the Interactive Productivity Facility, to do many of its services. They have been described here so that you might better understand the functions done for you by IPF. While many of them will work when invoked independently, IBM makes no claim that they will perform as documented unless invoked by IPF.

The stack referred to always is the CMS console stack, and all files are assumed to be CMS files.

Unless stated otherwise, all modules respond to "?" as the first parameter to display a brief explanation.

The notation used in the command descriptions is the same as that used in the *VM/370 CMS Command and Macro Reference Manual.*

ACCOUNT

This command processes VM/370 accounting cards and produces summaries of the data.

The command syntax is:

```
ACCOUNT <fn <ft <fm>>> <(options>
```

where:

fn ft fm   specify the input file to be processed. The default values are "ACCOUNT CARDS A1."

Options:

FIRST   creates a report for first shift only (08:00 - 17:15).

SECOND   creates a report for second shift only (17:15 - 24:00).

THIRD   creates a report for third shift only (24:00 - 08:15).

FROM mm/dd/yy
            sets the date of the earliest data to be processed. Dates prior to 1972 are not accepted.

TO mm/dd/yy
            sets the date of the most recent data to be included.

NOCHECKS

            inhibits checking to ensure that real CPU time is not less than the virtual CPU time.

USER xxxxxxxx
: limits processing to only those accounting cards generated for userid "xxxxxxxx."

ACCT xxxxxxxx
: limits processing to only the account number specified by "xxxxxxxx."

SUBTOT

: calculates subtotals by "account number." There may be more than one user for each account number; thus you have subtotals of information for the account numbers and the associated userids. Data for each account number is printed on a separate page.

SHORT
: prints only subtotals by "project number." All the accounting information for all users with a certain project number is totaled and those **totals** are printed. Project numbers are defined as the first four characters of the user's account number. Account numbers with the first four characters the same will be grouped together on the report.

Return Codes:

0	- Operation complete - no errors
1	- Input file error
3	- Invalid month in FROM/TO option
4	- Invalid day in FROM/TO option
5	- Year < 72 in FROM/TO option
69	- Missing operand on USER or ACCT option

Usage Notes:

The ACCOUNT module will handle only one project number per userid.

BROWSE

The BROWSE command lets you scan a file or a member of a library. Once in BROWSE, you can issue a BROWSE subcommand to get a split-screen BROWSE of different files or different levels within the same file.

| BROWSE | <fname | ? | * <ftype | * <fmode | *>>> <(options)> |

fname
: is the name of the file to be browsed. ? displays information about the BROWSE command and its use. * (the default) uses the first file satisfying the other search criteria.

ftype
: is the type of the file to be browsed. * (the default) uses the first file satisfying the other search

fmode
: is the mode of the file to be browsed. * (the default) uses the first file satisfying the other search criteria.

options
: are one or more of the following, separated by blanks and enclosed in parentheses:

H<elp> fn
>   specifies the filename of an EXEC to be called on
>   invocation of the HELP function (PF Key 1). The
>   default EXEC called is HBROWSE.

P<rofile> <(<fn<ft<fm>>>)>
>   specifies an alternate fileid to be used as the BROWSE
>   profile. The default profile used is BROWSE
> $PROFILE *.

N<oclear>
>   specifies not to clear the screen on entry to BROWSE.
>   The default is to clear the screen before display of the
>   first screen of the file to be browsed.

M<ember> member name
>   displays the specified member of the library
>   immediately on entry to BROWSE.
>   (see page 181)

Notes:

1. Unrecognized options are ignored by BROWSE.

2. If no fileid is specified when the BROWSE command is issued, the BROWSE
    section of this document is displayed on the screen.

BROWSE Subcommands

Several subcommands are available to help you browse a file or library member.
Unrecognized or invalid subcommands are left in the input area, and the audible
alarm is sounded.

Valid subcommands and their abbreviations are:

BACKWARD SUBCOMMAND

Backward Bn	<n>

The BACKWARD subcommand scrolls the screen window backward (toward the
top of the file).

n   is the number of pages to scroll backward. (A page consists of the
            data lines displayed below the level command line.) The default is
            one page.

BOTTOM SUBCOMMAND

BOttom	

The BOTTOM subcommand displays the last page of a file or library member. If
you are browsing a member of a library, the last page of the member is displayed.

CASE SUBCOMMAND

Case	<U|M>

The CASE subcommand sets the character controls translation of character strings used with the LOCATE function.

U   specifies uppercase characters. (U is the default.) The string and all data from the file is translated to uppercase before the comparison is done during later LOCATE commands. This means that case is effectively ignored for the comparison.

M   specifies mixed uppercase and lowercase characters. No translation is done on the string or the file data before the comparison is done in later LOCATE commands, so the string must be an exact match with file data to be found.

DICT SUBCOMMAND

DIct	

The DICT subcommand displays the names of the members in the library being browsed. This subcommand is only valid for libraries with fixed format, 80 character records.

DSPC Function

The DSPC function, which can be invoked only through a PF key, displays the current position of the cursor on the command input line.

DSPF SUBCOMMAND

DSpf	

The DSPF subcommand displays the current settings of the PF keys for BROWSE.

DOWN/NEXT SUBCOMMAND

Down Next	<n> <n>

The DOWN/NEXT subcommand moves the screen window down the indicated number of lines (toward the end of the file).

n   specifies the number of lines to move.

ENTER SUBCOMMAND

Enter	<fn	* <ft	* <fm	*>>>

The ENTER subcommand creates a new BROWSE level within the current file or a split-screen display of a file not currently displayed.

fn   specifies the filename of the new file to be browsed.

ft   specifies the filetype of the new file to be browsed.

fm   specifies the filemode of the new file to be browsed.

*   any * in the input string is replaced with the corresponding part of the fileid from the level where the subcommand was entered. After substitution, all levels are checked to see if that file is already active. If so, it is displayed. If the file is not yet active, a new level is created that replaces the level from which the subcommand was entered.

IF no parameters are supplied, the next logical level replaces the level from which the subcommand was entered. The first time a new level is created, the screen is split.

FORWARD SUBCOMMAND

Forward Fn	<n>

The FORWARD subcommand scrolls the screen window forward (toward the end of the file).

n   is the number of pages to scroll forward. (A page consists of the data lines displayed below the level command line.) The default is one page.

LEFT SUBCOMMAND

Left Ln	<n>

The LEFT subcommand scrolls the screen window toward the left.

n   specifies the number of columns to scroll left. The default is the width of the screen.

MEMBER SUBCOMMAND

Member	<member name>

The MEMBER subcommand displays a member within a library.

member name specifies the name of the member to be displayed. This subcommand is only valid for libraries with fixed format, 80 character records.

If no member name is specified, the last selected member is redisplayed. If a member is found, member select mode is entered. (The member name is displayed after the filename in the level header.) All scroll subcommands and the LOCATE function will be applied to the selected member only.

To exit from member select mode, use the DICT or QUIT subcommand, or the END PF key.

If member select mode was entered through the MEMBER subcommand, the END PF key or the QUIT command will display the dictionary. If member select mode was entered through the MEMBER option, the level is terminated.

QUIT SUBCOMMAND

Quit	

The QUIT subcommand ends the current level (or displays the dictionary if member select mode was entered through the MEMBER subcommand).

RIGHT SUBCOMMAND

Right Rn	<n>

The RIGHT subcommand scrolls the screen window toward the right.

n   specifies the number of columns to scroll right. The default is the width of the screen.

SET SUBCOMMAND

The SET subcommand controls display of line numbers and screen data format. The format of the SET subcommand is:

Set	<Hex On	OFf	Char> <Numbers On	OFf>

Hex On | OFf | Char

                turns hex format on or off. ON displays the file in hex format. OFF displays the file in EBCDIC format. CHAR displays the file in both EBCDIC and hex format. The default setting is OFF.

Numbers On | OFf

                controls the display of line numbers on the right side of the screen. The default setting is OFF.

If no parameters are specified, the current settings are displayed.

TOP SUBCOMMAND

Top	

The TOP subcommand displays the first screen of a file or member.

UP SUBCOMMAND

Up Un	<n>

The UP subcommand moves the screen window up the indicated number of lines (towards the top of the file).

n   specifies the number of lines to move the screen up. The default is 1 line.

VIEW SUBCOMMAND

View Vn	<n>

The VIEW subcommand displays the specified column of the input records in column 1 of the screen.

n   specifies the number of the column to be displayed in column 1 of the screen. If no parameter is specified, the current column setting is displayed.

/ SUBCOMMAND (LOCATE)

/string	</n <m>>

The / subcommand displays the record containing the specified character string on the level's current line.

The string is translated (or not translated) on the bases of the most recent CASE subcommand setting. If CASE U (the default) is in effect, the string (and all data from the file) is translated to uppercase before the comparison is done. If CASE M is in effect, no translation is done, and the string must match the data exactly.

string   specifies the character string to be located.

</n <m>>   specifies column boundaries to be used for the locate operation. Note that the closing delimiter is required only if boundaries are given.

n SUBCOMMAND

n	

The n subcommand displays the indicated record number as the level's current line. For example, to display the 100th line, enter 100.

= SUBCOMMAND

=	

The = subcommand repeats the last command for this level. The last command entered for the level will be executed again.

? SUBCOMMAND

?	<?>

The ? subcommand displays the last command entered for this level in the level command area. The command will be executed only if the user presses the ENTER key.

If two question marks are entered, the next to last command entered for this level is displayed.

& Prefix Function

The & character can be used as a prefix for BROWSE subcommands to leave the subcommand in the display area after execution; this allows repetitive execution.

Program Access Keys

The PA keys can be pressed while in the BROWSE environment:

PA1   brings you to CP. Enter B to return to BROWSE.

PA2   brings you to CMS Subset. Enter RETURN to return to BROWSE.

BROWSE PF Key Settings

Several PF keys are already set for use with the BROWSE command. The settings and associated BROWSE subcommands are:

PF Key	BROWSE Subcommand	Meaning
1		Obtain information on the use of BROWSE.
2		Split screen at cursor position.
3	Quit	End the level that contains the cursor.
4		Display the current cursor position.
5		Repeat last / (locate) command.
6		Line containing cursor becomes current line.
7	Backward	Scroll backward one screen.
8	Forward	Scroll forward one screen.
9	Top	Display first screen in file.
10	Left	Scroll screen left.
11	Right	Scroll screen right.
12	BOttom	Display last screen in file.

Using a BROWSE Profile

At initialization, a search is made for "BROWSE $PROFILE *" to set PF key functions, and to specify special options. The profile may be of fixed or variable format, LRECL up to 132.

Records recognized:

*OPTION option

EXITCLR   forces a clear of the screen on exit from BROWSE. This is useful to prevent confusion when using other full screen programs from which BROWSE is invoked. The Display Editing System, for example, will abend (end unsuccessfully) if the CLEAR key is not hit before pressing ENTER, after BROWSE is invoked.

*PFKEYS n keyword

n   specifies the number of the PF key to be set.

keyword   defines the function to be assigned to the PF key. The function may be an internal function or a user function. (Only one PF key can be set per record.)

Valid internal functions recognized in *PFKEYS records are:

Keyword	Meaning
BOT	Display the last page of a file or a member.
* CAN	Cancel all levels.
* CCL	Make the line indicated by the cursor the current line.
* DSPC	Display cursor position (record number and column).
* END	End level at cursor position.
* RPF	Repeat the last locate function.
* SCB	Scroll backward (toward top of file).
* SCF	Scroll forward (toward end of file).
* SCL	Scroll left the screen width.
* SCR	Scroll right the screen width.
* SPL	Move the split to the line indicated by the cursor.
TOP	Display first page of a file or a member.

Note: Those keywords marked with an * in the preceding chart are ONLY valid when issued from a PF key.

BROWSE Return Codes

0	- Execution complete - no errors
1	- Invalid console type (or disconnected)
2	- Insufficient free storage for execution
24	- Invalid filemode given
28	- No files found for search arguments
36	- Disk not accessed
1xxx	- Error xxx reading input file

CLRSCRN

Although the CLRSCRN module is provided, it is recommended that the VM/SP VMFCLEAR command is used instead.

CLRSCRN is a transient module that clears the 327x screen to ensure a clean display.

The command syntax is:

```
CLRSCRN <MORE>
```

When issued with no parameters, CLRSCRN immediately clears the console screen. The optional "MORE" parameter forces VM "MORE..." status, and allows the user to clear (or hold) the screen at his discretion.

Return Codes:

0   - Operation complete
8   - Invalid parameter given

CPFMT

This is a CMS module version of the IPF FMT program. CPFMT allows the CP format and allocate function to be executed as a CMS command. This eliminates the need to IPL the program, and then re-IPL CMS to resume execution, making the function available for disconnected service machines.

The command syntax is:

```
CPFMT <DEBUG>
```

The module checks to see if any stacked lines are present. If none are found, the virtual console is prompted for the format and allocate commands. Otherwise, the stack is used for command input, and no prompts are issued.

The stacked data must be complete for a given operation. That is, if any stacked data is present, it must be sufficient to complete the function. If a prompt to the console would be required, the operation is aborted with an error return code of 2. Errors in stacked data immediately terminate execution, and error return code 4 is set.

Once the requested operation has started, an interrupt from the console (by striking any key), will terminate the function. If input was from the console, the program will restart from the beginning. If command input was from the stack, the program will terminate and exit with error return code 6.

The optional "DEBUG" parameter will cause all prompts and responses to be displayed if running from stacked input. The parameter is ignored if input is not from the stack. A null response to console prompts for control statements (other than the beginning and ending extents) will terminate the function and cause a restart from the beginning. Null responses to the extent prompts will cause the defaults for the given device type to be used.

Return Codes:

0   - Operation complete
2   - Insufficient stacked input - operation aborted
4   - Invalid stack input - operation aborted
6   - Console interrupt with stacked input - operation aborted
8   - Error during requested operation

DCSSBKUP

This command creates a disk file containing the data from a CMS discontiguous shared segment (DCSS). The segment may be later restored using the DCSSRSAV module.

The command syntax is:

```
DCSSBKUP segname <fn <fm>> <(options>
```

segname   is the name of the DCSS as specified in the SYSNAME parameter of the NAMESYS macro in DMKSNT. This name is used as the default name of the file that is created. The filetype is always "DCSSBKUP."

                Note: The file that is created by this command will contain the same number of records as the number of pages occupied by the DCSS, plus 1. The extra record is used to record the starting address, segname, and so on. The file format is "F" with an LRECL (logical record length) of 4096 bytes. The virtual storage size must not exceed the segment starting address.

fn fm   are the optional filename and filemode of the file containing the DCSS data. The default name is the name of the segment, and the default filemode is "A1." The filetype is always "DCSSBKUP."

Options:

?   displays the DCSS starting storage address, ending address, and number of pages required by the segment. No disk file is created.

NOLOAD   prevents the module from purging and reloading the segment prior to creating the disk file. This is useful if the segment data is known to be resident at the time the command is invoked, such as following CMSXGEN, and so on.

Return Codes:

  0   - Data transfer complete - no errors
  4   - Segment name not specified
  4   - Invalid parameter/option specified
  8   - Virtual machine too large
100   - Explain complete

DCSSRSAV

Restores a CMS discontiguous shared segment from a disk file previously backed up by the DCSSBKUP module.

The command syntax is:

```
DCSSRSAV segname <fn <fm>> <(options>
```

where:

segname   is the name of the DCSS to be restored. The name is also assumed to be the default name of the file to be used for the operation.

Note: The user's virtual storage must completely encompass the DCSS to be restored.

fn fm   specify the filename and filename of the file to be restored. The default filename is the name of the DCSS, and the default filemode is "A1." The filetype must always be "DCSSBKUP."

Options:

?   displays the DCSS starting address, ending address, and number of pages occupied by the segment data in the DCSSBKUP file. The DCSS is NOT restored.

NEWNAME
            forces the module to use the "segname" parameter as the name of the DCSS to be restored, rather than the name contained in the DCSSBKUP file. However, the CP definition of the named segment must still match the data within the DCSSBKUP file.

Return Codes:

0   - Data transfer complete - no errors
4   - Segment name not specified
4   - Invalid parameter/option specified
8   - Virtual machine too small
12   - Invalid DCSSBKUP file format
16   - DCSSBKUP file description does not match CP's
100   - Explain complete

DEPRINT

This command transfers a printer file from the virtual reader to a disk file without losing carriage control characters.

The command syntax is:

```
DEPRINT fn <ft <fm>> <(options>
```

where:

fn ft fm   specify the fileid to be used for the output file. The filename,
                filetype, and filemode default to "PRINTER LISTING A1."

Options:

HOLD   retains the reader spool file when the command completes. The
                default is to purge the input file. This option is assumed in the
                event of processing errors.

Return Codes:

4   - No input print file
8   - Invalid channel command found
15   - Invalid output file specification

DEVTYPE

This command displays the device characteristics of any virtual address with
options to stack the result. It also allows display of the data returned by CP
diagnose X'24'. Refer to the *VM/SP System Programmer's Guide* for details on CP
diagnose X'24'. Refer to *VM/SP Data Areas and Control Block Logic* (Appendix
A) for detail on "BITS."

The command syntax is:

```
DEVTYPE nnn <(options>
```

where:

nnn   is the address of the device to be examined. If not specified, the
                virtual console address is assumed.

Options:

STK   causes the data to be stacked rather than displayed on the console.

BITS   displays (or stacks) the bits returned by the diagnose 24.

Return Codes:

0   - Operation complete
69   - Invalid device address given
100   - Tell (?) complete

DIRMAP

DIRMAP is a fast, efficient and flexible MDISK/LINK mapping program for the VM/370 user directory.

Calling DIRMAP

DIRMAP	{ < fn < ft < fm < outfm >>>> (options) }
	USER DIRECT * A1 ?

Note: Any of the following fields may be included in "DIRMAP DEFAULTS":

?   will display a list of the optional parameters that may be used

fn   filename of input directory (default USER)

ft   filetype of input directory (default DIRECT)

fm   filemode of input directory (default *)

outfm   filemode to be used for all output files (default A1)

DIRMAP Options:

DEVSORT   specifies that the MDISKMAP is to be sorted by device type first, then by volume serial (volser). The default is to sort by volser only.

DUPOK   specifies that duplicate MDISKs are acceptable and are not to be treated as overlaps. A flag of DUPOK is placed in the MDISKMAP and a message typed on the terminal. The return code is not affected by DUPOKs. Full pack MDISKs are ignored for the purposes of overlap detection.

EXCLUDE   specifies that volume ids found in "EXCLUDE VOLSERS *" are NOT to appear in the MDISKMAP. If the input file is not found, a message is issued, and no volids are excluded.

GAPFILE   specifies that all gaps found are to be written in a special format to file "fn GAPFILE." If the input file "GAPFILE VOLSERS" is found, it is scanned for volids to be selected for the GAPFILE. See the sections on input and output files for the file formats.

          Filtering of volids by other options (e.g. EXCLUDE) will affect this option. To select the same volids as those selected by other options, it is necessary only to put the keyword "ALL" in "GAPFILE VOLSERS."

INCLUDE   specifies that MDISK filtering is to be done on the basis of those volids found in the file "INCLUDE VOLSERS." Only MDISKs on volids found in this file are processed for the purposes of the MDISKMAP and LINKMAP.

LINKS   specifies that "fn LINKMAP" is to be produced. This file contains a
          map of all LINKs to MDISKs on the volids processed. Any LINKs to
          nonexistent MDISKs produce a message on the terminal and are
          flagged in the LINKMAP.

NOCYL0   is for use with the GAPFILE option. It specifies that any gap that
          starts on cylinder 0 is to be recomputed to start at cylinder 1, before
          being written to the GAPFILE. This is intended to prevent MDISKs
          being allocated on cylinder 0, and thus being able to change the real
          volid of the disk.

          NOCYL0 may also be specified by including the keyword
          "NOCYL0" in the "GAPFILE VOLSERS" file.

UNSORT   specifies that the utility file "DIRECT UNSORT" is to be created.
          This file is required for VMAP (VM/370 Monitor Analysis Programs)
          if SEEKS analysis is to be done. Output is similar to that produced by
          VMAP's MONMINI program.

DIRMAP Input Files

There are four optional input files that can be used by DIRMAP to change the
content of some of the output files. Input files may reside on any accessed CMS
disk.

The filename, filetype, and filemode defaults can be overridden by parameters
supplied when DIRMAP is called, or by using the defaults file.

All four files follow the same format and are scanned in the same manner. The
files must be fixed block with a logical record length of 80 and conform to the
following standards:

* Comments may be included in the files. These are indicated by an asterisk in
  column 1.

* Fields to be scanned must be contained within columns 1-71 inclusive, and
  must be separated from one another by at least one blank.

* If all the required fields will not fit on a line, a continuation line may be used.
  There is no limit on the number of continuation lines that may be used.

INCLUDE VOLSERS is used by DIRMAP to select certain MDISKs that are to
                 be included in the MDISKMAP. This file is accessed only
                 if the "INCLUDE" option is specified. Fields containing
                 more than 6 characters are ignored. If the keyword
                 "ALL" is found, then all volids are considered to pass the
                 "INCLUDE" filtering.

EXCLUDE VOLSERS is used by DIRMAP to select certain MDISKs that are to
                 be excluded from the MDISKMAP. This file is accessed
                 only if the "EXCLUDE" option is specified. Fields
                 containing more than 6 characters are ignored. If the
                 keyword "ALL" is found, then NO volids will pass the
                 "EXCLUDE" filtering.

GAPFILE VOLSERS is used by DIRMAP to select certain MDISKs whose GAPs are to be included in the GAPFILE. This file is accessed only if the "GAPFILE" option is specified. Fields containing more than 6 characters are ignored.

If the keyword "ALL" is found, then all volids are considered to pass the "GAPFILE" filtering. EXCLUDE/INCLUDE filtering also affects GAPFILE filtering, so "ALL" may be used if either of those options filters the correct volids for GAPFILE.

DIRMAP DEFAULTS is scanned after the command line plist has been processed. This file may contain default filename, filetype, filemode, output-filemode and options. DIRMAP builds a plist, similar to the standard CMS one, from the parameters found in the defaults file. Default file characteristics are passed in the default plist only if the corresponding field was not specified on the command line.

For example, if no filename was specified on the command line, then the filename indicated by the defaults file is used. If the defaults file has no filename specified, then DIRMAP MODULE's default is used as normal. Default options are always placed in the default plist, but may cause error messages if they conflict with other options or are invalid. Option errors in the default plist are ignored after a message is typed to indicate the error. This applies to conflicting and invalid options, and missing or invalid option parameters.

DIRMAP Output Files

There are four output files that can be produced from a single run of DIRMAP. All output files have the same filemode (are on the same disk). The filemode may be selected when DIRMAP is called.

fn MDISKMAP is the map of all the MDISKs. This file is always produced (unless an error occurs). It should be printed with the "CC" option.

fn LINKMAP is the cross-reference map of all LINKs in the directory. This file is produced in response to the "LINKS" option, and should be printed with the "CC" option.

fn GAPFILE is a list of all the GAPs that were detected and is intended for use by REQUEST (Directory Maintenance Program) and by the "GAP EXEC" shipped with version 2. The format of the GAPFILE is:

columns	01-06	volid of disk
columns	09-15	device type of disk
columns	17-22	start cylinder/block of gap
columns	23-28	end cylinder/block of gap
columns	29-34	no. cylinders/blocks in gap
columns	36-41	same as cols 17-22
columns	43-48	same as cols 23-28

columns 50-55 same as cols 29-34

All other fields are blank.

This file is produced in response to the "GAPFILE" option.

DIRECT UNSORT is a file produced in response to the "UNSORT" option. It is intended for use by VMAP (VM/370 Monitor Analysis Program). Format is similar to the output from VMAP's MONMINI program.

DIRMAP Requirements and Restrictions

- Input files must be F 80 format on any accessed CMS disk.

- There must be a R/W disk available for output files, indicated by the output-filemode parameter (default A1).

- A disk that has only full pack minidisks is not considered to have any GAPs, unless it appears in "GAPFILE VOLSERS" and the GAPFILE option was specified. When these conditions are satisfied, the complete disk is considered to be a GAP (less cylinder 0 if NOCYL0 option was also specified). The use of the keyword "ALL" in the GAPFILE does not simulate the above condition, and the volid is still required.

- The size of a disk is assumed to be the smallest defined size that can contain the highest minidisk extent. For instance, a 3330 Model 11 which has no minidisk extent higher than cylinder 403 will be assumed to be a 3330 Model 1. To overcome this problem, it is necessary only to define a full-pack minidisk extent for the volid affected.

DIRMAP Return Codes

DIRMAP has been written to issue meaningful messages in error situations. Return codes normally are those returned by CMS macros used for reading or writing the files. Reference to the *CMS Command and Macro Reference Manual* will show the cause of the error.

Where the error is logical rather than physical, a message is issued giving the reason for the error, and the return code is set to either 104 (processing complete - minor errors), 108 (processing complete - serious errors), or 112 (processing incomplete). These return codes are high deliberately so that they will not be confused with physical errors.

104   undefined device type found, or invalid directory statement, or LINK found without corresponding MDISK

108   OVERLAP found, or no MDISKs found, or LINKMAP requested but no LINKs found.

112   invalid option supplied, or insufficient Free Storage, or format of input file not fixed 80, indicating gaps and overlaps in the definitions.

FILESTCK

Although the FILESTCK command is provided, it is recommended that the VM/SP EXECIO command is used instead.

The FILESTCK command does data transfers from the stack to a file. Parameters allow control of format, logical record length, tokenization, and the order which the lines are inserted in the file. Note that the parameters given in the following list are positional (parms skipped over may be given as "*" to use default values).

The command syntax is:

```
FILESTCK fn ft fm <F/V <iteml <lineno <nolines>>>> <(code)>
```

where:

fn ft fm	specify the fileid to be created or changed. If the file did not exist before the command execution, a new file is created.
F/V	is the record format for new files (F=fixed, V=variable). If unspecified (or given as "*"), new files default to "V" format. Existing files default to the old format.
iteml	is the item length for new (or V format) files. If unspecified (or given as "*"), the default is the old value (for RECFM F) or 130 (for RECFM V).
lineno	specifies the first (or only) line number of the file to be added or changed. If unspecified (or given as "*"), the data is appended to the file.
nolines	is the number of stacked lines to be used. If given as "*," the operation continues until a null line is read. If the value is <0, the lines are added in reverse order.

Options:

code	is the WAITRD code to be used to read the stacked line(s).
S	pads the data to 130 characters with X'40' (blanks).
T	reads a logical line (delimited by X'15' characters).
U	translates to uppercase and tokenizes the data (padding with X'40' where necessary).
V	translates the data to uppercase.
W	reads a logical line (up to 255 characters).
X	reads a physical line ignoring line-end characters.

Return Codes:

0	- Data transfer complete - no errors
1-7	- as from FSWRITE
8	- Data truncation occurred
9-19	- as from FSWRITE
20	- Invalid parameter list (plist)
21	- Incompatible file plist
22	- No stacked lines to read
100	- (TELL)

FINDSTAK

Although the FINDSTAK command is provided, it is recommended that the VM/SP EXECIO command is used instead.

This command does data transfers from a file to the stack. A large variety of search parameters are allowed to enable record selection on the basis of content. The optional controls are keywords, and may be given in any order; however, they may not be mixed with the search argument values.

The command syntax is:

```
FINDSTAK fn ft fm <¬> pos1 item1 <<+,|> <ALL> <LIFO>
        <ITEMNO> <BLANK x> <NOBLANK> <GROUPn>
        <LIMnnn> <ITEMCNT>>
```

where:

fn ft fm   specify the name of the file to be searched.

pos1   gives the position to be examined (also see GROUPn): Tnn specifies "token" nn (tokens are words separated by blanks). Cnn (or nn alone) specifies column nn.

item1   is the search string to be used, and is limited to a maximum length of 8 characters. The comparison is limited to the number of characters in the search string. This means that if fewer than 8 characters are given, any token beginning with that string will satisfy the search. Append the "_" (underscore) character to the search string to search for a token of less than 8 characters. (Also see BLANK x.)

Additional search parameters may be given. Use either a "NULL," "+" or "AND" for the AND condition. Use either a " | " or "OR" for the OR condition. A leading ¬ symbol negates the following comparison, so a record may be found that does NOT contain the search string.

Only the first line satisfying the search parameters is stacked. Also see the "ALL" and "LIMnnn" keywords.

Optional keywords:

ALL   causes all lines satisfying the search argument(s) to be stacked, rather than just the first line.

LIFO   causes lines to be stacked LIFO (the default is FIFO).

ITEMNO   stacks the file item number of each stacked line (following the data line itself).

BLANK x   changes the "blank character" to the character given by "x." This allows a search for an item containing the "_" (underscore) character, which is the default "blank character."

NOBLANK   deletes the "blank character" feature altogether (including the default character).

GROUPn   allows logical records within a file to occupy more than one physical record. The digit (represented by the "x") defines the logical record size as "x" physical lines, and the file is then searched "x" records at a time.

            Note: The token or column may then be specified as "pos1/relrec," where relrec indicates the relative record of each group to be examined.

LIMnnn   causes an upper limit (of "nnn") on the total number of lines stacked (excluding the "ITEMCNT" line, but including lines stacked as a result of the "ITEMNO" option).

ITEMCNT   stacks (LIFO) the total number of stacked lines.

Some Operational Notes:

1. If every defined field value matches an input group, that group will be stacked. If no fields are defined, every group in the file is assumed to satisfy the selection criteria.

2. FINDSTAK is a transient routine. If it is called several times without the "ALL" option, it will continue searching the file following the last record found. If FINDSTAK is overlaid by another transient routine, the next call will cause the search to begin again from the beginning of the file.

3. Whenever FINDSTAK encounters an end-of-file condition, it will close the current file. This implies that whenever it is invoked with the "ALL" option, it will close the file (unless some error occurs). Otherwise, the input file will NOT be closed, so that a later call referring to the same file may be handled more quickly. If that later call refers to a different file, the former files is closed before the new file is opened.

   If FINDSTAK does not reach the end-of-file, the file will be OPEN for reading when control returns to the calling routine or exec file.

4. Any invalid call to FINDSTAK (return code 101) will cause the next call to start at the beginning of the file. An attempt to invoke FINDSTAK for a file that is open for write is an error, and is diagnosed by a return code from FSREAD, which is passed on to the caller.

Return Codes:

0	- Data transfer complete - no errors
1	- No record found (End-Of-File)
3-13	- as from FSREAD
24, 28, 36	- as from STATE
20	- Invalid parameter list
21	- File item length > 255 - cannot stack records
100	- (TELL)
101	- Invalid parameter list

FLIST

This command displays a full-screen list of the selected files. Once in FLIST, you can do normal CMS file operations such as EDIT, COPY, and ERASE on the listed files by entering the command in the input area immediately to the right of each fileid on the screen. You can also issue FLIST subcommands to sort the displayed data, or to enter a new FLIST level that displays a full-screen listing of another set of files.

The format of the FLIST command is:

FLIST	<fname <ftype <fmode>>> <(options)>

where:

fname   is the name of the file(s) to be listed. The default is *.

ftype   is the type of the file(s) to be listed. The default is *.

fmode   is the mode of the file(s) to be listed. The default is A.

options   specify one or more FLIST options. See "FLIST Options" below for details.

Notes:

1. The < and > characters enclose optional parameters in the command syntax descriptions. The closing) is never required unless another parameter follows.

2. A pattern may be specified for the filename and/or filetype. The special pattern characters recognized are the * (asterisk) and + (plus sign). An * means "any number of any character" while the + means "one of any character." The following are some valid filename and filetype parameters:

Parameter	Meaning
ABC*	A 3-8 character name beginning with ABC.
*ABC	A 3-8 character name ending with ABC.
ABC	A 4-character name beginning with ABC.
A++D	A 4-character name beginning with A and ending with D.
++	Any 3-character name.
*	All names (or modes) are accepted.

FLIST Options:

H<elp> fn

> specifies the filename of an EXEC to be called on invocation of the HELP function (/H is an FLIST command). The EXEC name used by default is HFLIST.

M<enu>

> is used with the USE option to prevent formatting of the screen to the right of the input areas. When MENU is specified, the text from input file columns 7-26 is placed in screen columns 1-19. The text from file columns 29-64 is moved intact to the right of the input areas.

P<rofile> (<fn<ft<fm>>>)

> specifies an alternate fileid to be used as the FLIST profile. The default profile used is FLIST $PROFILE *.

N<oclear>

> specifies not to clear the screen on entry to FLIST. The default is to clear the screen before display of FLIST.

S<tack>

> specifies stacking of the following line if the input area is used:

> *FLIST nnnnn filename filetype filemode user's input

> where:

*FLIST	will make it a comment if CMS reads it.
nnnnn	is the file entry number in the list.
filename	is the displayed filename.
filetype	is the displayed filetype.
filemode	is the displayed filemode.
user's input	is anything the user typed.

O<ne> <(recno)>

> causes the first selected input line to be stacked (implies STACK). If recno is specified, the display starts at recno.

PROT<ect>

> specifies that input fields can be used only once.

SO\<rt\> fn

        specifies an alternate exec filename to be called when an FLIST sort
        subcommand (/Sx) is issued and the USE option is also given. The
        default filename is FLISTS.

U\<se\> \<(\<fn\<ft\<fm\<)\>\>\>\>\>

        specifies display of the named file (which must be in CMS EXEC
        format) rather than FLIST's file listing. If no fileid is specified,
        CMS EXEC * is used. The data from file columns 7-26 is placed in
        screen columns 1-19.
        The remainder of the data columns are placed in the appropriate
        columns of the display following the user input areas. This means
        that the LISTFILE DATE or LABEL options should be used when
        the input file is created.

FLIST Subcommands

The following subcommands are available to help you once you enter FLIST.
(Abbreviations are shown in capital letters.):

/BOTTOM SUBCOMMAND

/Bottom	

The /BOTTOM subcommand displays the last page of the current FLIST level.

/CANCEL SUBCOMMAND

/Cancel	

The /CANCEL subcommand cancels all active FLIST levels without processing
any other commands that are entered after the /CANCEL command.

/DSPF SUBCOMMAND

/Dspf	

The /DSPF subcommand displays the PF key settings for FLIST.

/ENTER SUBCOMMAND

/Enter	\<fn \<ft \<fm \<options\>\>\>\>

The /ENTER subcommand enters another FLIST level.

Refer to the FLIST command for descriptions of the /ENTER subcommand
operands. When creating the second level, the screen will be split into two equal
parts. To change the location of the split, see the SPL function. The PROFILE is
only processed on initialization of the first level.

To display a previous level, the /En form of the subcommand may be used where "n" is a digit in the range 0-9 corresponding to the level desired. The level identifier (LVL n) is in the upper-left corner of the display.

/HELP SUBCOMMAND

/Help	

The /HELP subcommand displays information on the use of the FLIST facility.

/LEVEL SUBCOMMAND

/Level	<fn <ft <fm <(options)>>>>

The /LEVEL subcommand enters another FLIST level.

Refer to the FLIST command for descriptions of the /LEVEL subcommand operands. When creating the second level, the screen will be split into two equal parts. To change the location of the split, see the SPL function. The PROFILE is only processed on initialization of the first level.

To display a previous level, the /Ln form of the subcommand may be used where "n" is a digit in the range 0-9 corresponding to the level desired. The level identifier (LVL n) is in the upper left corner of the display.

/OMIT SUBCOMMAND

/Omit	text text text ...

The /OMIT subcommand (as the first token) prevents appending the fileid to the input text and may be used to issue CP or CMS commands. However, specific /n, /t, or /m symbols are substituted.

/QUIT SUBCOMMAND

/Quit	

The /QUIT subcommand leaves the current FLIST level after processing entered commands for the level.

/SORT SUBCOMMAND

/Sn /St /Sm /Sl /Sb /Sd	

/sn   specifies sorting by filename, filetype, filemode.

/st   specifies sorting by filetype, filename, filemode.

| /sm | specifies sorting by filemode, filename, filetype. |

| /sl | specifies sorting by record length, filename, filetype, filemode. (Largest record length first.) |

| /sb | specifies sorting by block size, filename, filetype, filemode. (Largest block size first.) |

| /sd | specifies sorting by date, time, filename, filetype, filemode. (Most recent file first.) |

The /SORT subcommand lets you sort the current FLIST level on the specified field(s). After sorting, the level is redisplayed from the top. If entries have been deleted, they are removed during the sort.

The SPL (split) function can be invoked only through a PF key. It moves the screen split to the line where the cursor is positioned.

/TOP SUBCOMMAND

/Top	

The /TOP subcommand displays the first (top) page for the current level.

/nnnnn SUBCOMMAND

/	
/n<nnnn>	

Where:

| / | positions the associated entry on the level top line. |

| /<nnnnn> | positions the file nnnnn on the level top line. |

The /nnnnn subcommand positions the indicated line on the top line of the current level.

= SUBCOMMAND

=	

The = subcommand repeats the last non-FLIST function for the current level. (FLIST functions, save for the /LEVEL, /ENTER, and /OMIT subcommands, cannot be repeated.) The repeat function does not cross level boundaries.

? SUBCOMMAND

?	

The ? subcommand displays the last non-FLIST function for the current level. This allows you to see what to expect if the = subcommand were entered. To reexecute the displayed command, you must overtype at least one character of the command.

PA and PF Keys

You can press the PA keys while you are in FLIST:

1. PA1 enters CP mode.

   To return to FLIST, enter:

   B

2. PA2 enters CMS Subset mode.

   To return to FLIST, enter:

   RETURN

PF KEY FUNCTIONS

Several PF keys are already set for use with FLIST. The settings and associated
FLIST functions are as follows:

PF Key	Keyword	FLIST Action
1	/H	Call the HFLIST EXEC (or equivalent).
2	* BRW	Browse the file to the left of the cursor.
3	* END	End the level at cursor position.
4	XEDIT	Edit the file at the cursor position with the VM/System Product Editor. (XEDIT)
5	* SPL	Move the split to the line indicated by the cursor.
6	/SB	Sort by block size, filename, filetype, and filemode.
7	* SCB	Scroll backward (towards top of list).
8	* SCF	Scroll forward (towards bottom of list).
9	/SD	Sort by date, time, filename, filetype, and filemode.
10	/ST	Sort by filetype, filename, and filemode.
11	* >I	Increase input area to end of line.
12	* CAN	End all levels and clear stack if STACK option is in effect.

Figure 36. PF Key Functions Under FLIST

Note: Keywords marked with an * in the preceding list are valid ONLY when
issued from a PF key.

Using the Input Areas

You may use the input areas after the fileids to enter any command as if in the
normal CMS environment, to execute CMS/CP functions, or to invoke an EXEC.
You need to provide no special indication to identify that the command is for CP or
that it is an EXEC. However, to prevent any part of the fileid from being used in
the command string, the /O function should be used as the first parameter.

If the fileid (or part of it) is to be inserted in the command entered in the user input
area, the special indicator / can be used. It may be used anywhere in the
command sequence, as follows:

/ - Insert the complete fileid.
/n - Insert the filename.
/t - Insert the filetype.
/m - Insert the filemode.

Any combination of n, t, and m is valid up to a maximum of 7 characters.

If not explicitly specified, FLIST will append the complete fileid to the user command area. For example, if "ERASE" alone is entered, FLIST will generate the command string "ERASE filename filetype filemode" and pass it to CMS for execution.

Note: You should use the /O subcommand to prevent the fileid from being appended to the input text. If used, /O must be the first token on the line.

After executing a command, the CMS console input stack is processed. Input starting with a / will replace the original command and will be processed as if it had been entered by the user. Input not starting with a / will be passed to CMS without any change in the contents of the line. If the stack is empty, the next input field is processed.

When all input fields are processed, the screen is redisplayed and the input area is changed to indicate what happened. If the first character of the input area is displayed as:

*   The command was valid and gave a zero return code.
¬   The specified command gave a non-zero return code.
       The return code is displayed following the ¬ symbol.
       An unknown FLIST subcommand was issued.
?   The command was unknown to CP/CMS.

Invalid FLIST functions will remain displayed. If any error condition arises, the ALARM will sound.

Below are examples of using the input area:

Fileid	Input Area Entry	Resulting Command
fn1 ft1 a1	erase	erase fn1 ft1 a1
fn2 ft2 a1	assemble /n	assemble fn2
fn3 ft3 a0	copy / = = b1 (rep	copy fn3 ft3 a0 = = b1 (rep
fn4 ft4 a0	copy / /nt b1	copy fn4 ft4 a0 fn4 ft4 b1
fn5 ft5 a5	/tn	ft5 fn5
fn6 ft6 a1	/o msg op	msg op ... ...

Figure 37. Uses of the Input Area

General Notes :

1. Never reaccess a disk that is displayed on one of the levels.

2. Do not erase files displayed on any level with an EXEC or with an "erase * filetype filemode" sequence.

3. Do not erase a file that is displayed on more than one level.

These situations cannot be detected by FLIST and may result in random displayed fileids or FLIST termination.

Using an FLIST Profile

At initialization, a search is made for "FLIST $PROFILE *," which can be used to set PF key functions or to override the default top and bottom titles.

The file may be of fixed or variable format, with a logical record length (LRECL) of up to 132 characters. After processing the profile, a check is made for the CMS console input stack. Stacked records are treated in the same way as profile records.

The profile is processed only once. This is during initialization of the first level.

The profile records that are recognized are:

*HEADER header-text

The first 50 characters following *HEADER will replace the level title line. The text is centered in the top title.
*PFKEYS n <(btd)> function <comments>

n   specifies the number of the PF key to be set.

(btd)   if specified, defines the text to be shown in the bottom title. The text must be placed between brackets and be three characters long. If btd is not specified, the first three characters of the function are used.

function   specifies either the FLIST keyword to be assigned to the PF key or any CP/CMS command. Only one PF key or command can be set per record.

The valid FLIST keywords recognized in *PFKEYS records are:

Function	Meaning
SPL	Split the screen at the cursor position.
BRW	Invoke BROWSE function.
HLP	Invoke the HELP function (HFLIST EXEC).
SCF	Scroll forward (toward the end of the file).
SCB	Scroll backward (toward the top of the file).
>I	Increase user input area to end of line.
CAN	Cancel all levels.
END	Terminate the level containing the cursor.
%%	Clear the definition for the PF key.

Note: Keywords listed above are valid ONLY when issued from a PF key.

FLIST keyword specifications cannot be abbreviated and must be written in uppercase. If one of the keywords is specified, the bottom title is updated accordingly and the PF key is set to that function.

The difference between FLIST functions and others is that non-FLIST functions will be placed in the input area and then processed. FLIST functions can be used in combination with entered data.

Any record not beginning with *HEADER or *PFKEYS replaces the bottom title, and must be the last profile record.

FLIST Return Codes

0	- Execution complete - no errors
1	- Console not a screen or disconnected
2	- Insufficient free storage available
24	- Invalid filemode specified
28	- File not found
36	- Disk not accessed
1xxx	- xxx is return code from FSREAD (+1000)

GETFMADR

This command stacks the first available filemode and virtual disk address, thus allowing an EXEC to link and access a disk without disturbing the existing links or accesses.

The command syntax is:

```
GETFMADR <starting-disk-address>
```

where:

"starting-disk-address"

is the optional starting virtual disk address, which overrides the default of 120.

The format of the stacked line is:

Token	Content
1	* (viewed as a comment by CMS)
2	the first free mode letter (or Z if none free)
3	the first free virtual disk address
4	the current disk now accessed as Z

Note: The fourth token is present only if all modes (including Z) are in use. Therefore, if Z is returned as token 2, the user must check for the presence of token 4 to determine if a disk is currently accessed as Z, or if Z happened to be the last available mode letter.

The return code from GETFMADR is always 0.

MOUNT

MOUNT enhances and formalizes user/operator mount communications by periodically prompting the operator until the tape or disk mount requests are satisfied.

The MOUNT command supports the following activities:

- Requesting mounts

- Cancelling mounts

- Querying the status of mount requests

You can request these functions either through IPF panels or directly under CMS through the IPF MOUNT command.

The format of the command to request a tape mount is:

```
MOUNT <FOR userid> tapenum virtaddr <comments>
```

where:

FOR userid   requests a tape mount for the user specified by userid. This facility lets you request a a mount for another user running in a non-CMS environment. MOUNT can be issued ONLY under CMS.

tapenum   is the one-to-eight-character alphanumeric external label of the tape/disk to be mounted.

virtaddr   is the three-character virtual address to be assigned to the tape or disk to be attached.

comments   are optional instructions to the operator, such as "Mount tape with a ring." The maximum is twelve 8-character words.

The format of the command to cancel a mount is:

```
MOUNT CANCEL TAPENUM
```

This command can be issued by operator or submitter.

Where:

tapenum   is the one to eight character alphanumeric external label of the tape or disk to be canceled.

The format of the command to query the status of a mount request is:

```
MOUNT QUERY <ALL>
```

Where:

ALL   allows the operator to determine all pending requests (across all users on the system).

OPTIMISE

Although the OPTIMISE command is provided, it is recommended that the XEDIT VMFOPT macro is used instead.

This command optimizes EXEC files by replacing the labels in &GOTO statements with absolute line numbers. The same module also reverses the process to allow changes to the file. A message is displayed on the virtual console regarding the number of statements changed, unchanged, and so on.

The command syntax is:

```
OPTIMISE fn <ft <fm>> <(options>
```

where:

fn   is the filename of the EXEC file to be processed. The filetype and filemode are optional, and default to "EXEC" and "A1" respectively.

Options:

OFF   reverses the optimization process, replacing absolute line numbers in &GOTO statements with the labels originally specified.

NO   suppresses messages to the virtual console.

Return Codes:

Normal:
  0 -   Operation complete - No errors
Errors:
  7 -   Duplicate labels found
  8 -   File width exceeds maximum
 16 -   Misc error - missing label, no target, and so on
 24 -   Invalid option given
 25 -   Symbol table overflow (>1024 labels)
100 -   Explain request

1nn -   Error "nn" from FSWRITE (+100)
2nn -   Error "nn" from FSREAD (+200)
3nn -   Error "nn" from CMS RENAME command (+300)

REPRINT

This command transfers printer files from the virtual reader to the virtual printer without losing carriage control characters. Any tag information associated with the file is displayed when the file is processed.

The command syntax is:

```
REPRINT <ofn <oft>> <(options>
```

where:

ofn and oft

allow a different filename and filetype to be assigned to the printer
spool file. The default is to assign the same filename and filetype as
the reader spool file.

Options:

HOLD

causes the input spool file to be held in the virtual reader. The default
is to purge the file. This option is automatically assumed if any errors
occur during execution of the command.

PRINTABL

forces the translation of the input file data to the standard
64-character set. Unprintable characters are changed to blanks
(X'40').

Return Codes:

4   - No input print file
8   - Invalid channel command found

You can also use the TRANSFER command to transfer your closed spool files to a
specified user or queue, or to reclaim closed spool files that you created. Refer to
the *VM/SP release 2 CP Command Reference Manual*, for details.

SADT

This command stacks the pertinent information from the CMS ADT (active disk ·
table) for the specified mode.

The command syntax is:

```
SADT <mode | ?? | *>
```

where:

mode   is the access mode letter of the disk to be queried. There is no default
            for the parameter; invoking SADT with no arguments causes the "tell"
            text to be shown (as if "?" had been given).

            The return code indicates the result of the query. If the disk is CMS
            format (return codes 0 and 1), a single line is stacked that contains
            information about the disk.

The format of the stacked line is:

Token	Content
1	disk label
2	blocks used
3	blocks left
4	device address
5	primary mode letter
6	primary mode</<extension mode (if any)>>
7	number of files
8	number of cylinders
9	device type (3330, 3340, and so on)
10	R/W or R/O (dependent on link and access)
??	stacks one line (as above) describing the R/W CMS disk with the most free space.
*	stacks one line for each CMS disk (as above), followed by a null line to indicate the end of the stacked data.

Return Codes:

0	- Disk is read-write	
1	- Disk is read-only	(incl. read-only extension)
2	- Disk is not accessed	(nothing stacked)
3	- Invalid parameter list	(nothing stacked)
4	- OS disk	(nothing stacked)
5	- DOS disk	(nothing stacked)
100	- Explain complete.	

You can also use the QUERY command to gather information about your CMS machine. Refer to the *VM/SP release 3 CMS Command and Macro Reference*, for details.

SETKEYX

This command sets the storage keys for saved segments (DCSS). To ensure that CMS segment protection is enabled, the storage key should be set to something other than 15 (X'F') before the CP SAVESYS command is issued. A key of 13 (X'D') is normally used for DCSS areas.

The command syntax is:

```
SETKEYX key sysname
```

where:

key   is the storage protection key, specified in decimal. The valid keys are 0-15.

sysname   is the name of the saved system or segment for which the storage protection is being assigned.

For additional information on discontiguous saved segments, refer to the *VM/SP System Programmer's Guide*.

SHRLDR

This command allows a discontiguous saved segment (DCSS) to be saved from a virtual machine whose virtual storage does not encompass the DCSS area.

The command syntax is:

```
SHRLDR sysname textname <entrypoint>
```

where:

sysname   is the name of the DCSS to be loaded (the name specified in DMKSNT).

The specified DCSS is accessed (via Diagnose 64 "load unshared"), and the text file is then loaded at the segment start address. Once the segment has been loaded, the storage keys should be set using the SETKEYX command (see below). This command is an extension of the CMS SETKEY command that does not check for addresses outside the users virtual storage.

Note: The required "CP SAVESYS sysname" command is not done by this module, and should be executed either manually, or from a calling EXEC.

textname   is the name of the text file to be loaded in segment "sysname."

Only a single text file is acceptable as input. If the system to be saved consists of multiple text files, use the CMS PRELOAD command to create a single text file.

entrypoint   is the address of the entry point of the segment, and need only be supplied if the first CSECT address is not the entry point.

A single line is stacked by the program describing the results of the operation. The format of the stacked line is:

Token	Content
1	* (viewed as a comment by CMS)
2	system name
3	system load address
4	system end address
5	entry point address

Return Codes: 0 - Execution complete - no errors

STAG

Although the STAG command is provided, it is recommended that the VM/SP EXECIO command is used instead.

The CP operand used with the TAG command provides similar information. The STAG command stacks the tag information associated with the specified reader file.

The command syntax is:

```
STAG <spoolid>
```

where:

spoolid   is the spoolid of a file in the virtual reader, which must be given as exactly 4 decimal digits. If not specified, the tag data for the first reader file is stacked.

Return Codes:

0   - Operation complete - Tag data stacked
1   - File exists - no tag data
2   - File does not exist
3   - Parameter error
100   - Explain complete

You can also use the TAG command to associate file descriptive information with a VM/SP spool file. Refer to the *VM/SP release 2 CP Command Reference*, for details.

STCONV

This program converts a tape created by the SPTAPE command from VM/370 Release 6 format to VM/SP format, or back. Since a cold start is required when moving from Release 6 to VM/SP, this allows the transition to be made without loss of spool files. The STCONV module is called by the STCONV EXEC, which prompts the user for the required input parameters.

The command syntax is:

```
STCONV
```

To Use STCONV:

1. Create a spool tape on Release 6 using the SPTAPE command. Read the *VM/SP Operator's Guide* for the SPTAPE command format.

2. Log on to a CMS userid with access to STCONV.

3. Attach two tapes at CMS supported addresses (181 to 184).

4. Enter:

    ```
    STCONV
    ```

    You will be prompted to define the input and output devices.

    a. If the device is a tape drive, enter:

        ```
        TAPn
        ```

where n is 1, 2, 3 or 4, according to the virtual device address. For the output tape, you may specify the density as the second parameter.

b. For a disk file, enter the filename, filetype, and filemode. These parameters will be passed to CMS FILEDEF without checking.

Notes:

1. You may automate this definition by putting the required responses in the CMS STACK before invoking STCONV. Or, issue the required filedefs yourself and invoke the STCONV program without the EXEC.

2. The program writes a single tape mark at the end of the output tape; however, two are required. Place another one there by entering:

```
TAPE WTM
```

The program uses OS macros. Therefore, the EXEC sets DOS OF if it is set on. You lose any DLBLs in effect at the time.

3. If both the input and output files are tape devices, they will both be rewound before and after the operation, and all the spool files on the tape will be converted, up to the first double tapemark.

4. If either the input or output files are on disk, a single spool file will be converted, and the tapes will not be repositioned. (The disk facility allows testing of this program without the need for two tape drives, and also would enable a two-stage conversion in an installation with just one tape drive.)

5. The program also works in reverse. If the input is a tape created under VM/SP, it will be converted to Release 6 format. Therefore, during a testing period, spool files can be moved back and forth at will.

6. A console message is produced for each file converted, as follows:

```
INPUT    OWNERID    ORIGINID    FILENO    RECDS    CLASS    TYPE
REL 6    LAS01      LAS01       3750      152      A        PRIN
```

7. If the output is assigned to tape, you can take it to a VM/SP system (or Rel 6) and load the spool files with SPTAPE LOAD.

USERID

Although the USERID command is provided, it is recommended that the VM/SP IDENTIFY command is used instead.

The USERID command returns the userid and other information via the CMS console stack.

The command syntax is:

```
USERID
```

The format of the stacked line is:

Token	Content	Description
1	*USERID	(viewed as a comment by CMS)
2	userid	whatever...
3	reserved	%
4	date	mm/dd/yy
5	time	hh:mm:ss
6	day	three characters (MON, TUE, etc.)
7	day-of-week	(numeric - Monday= 1, Tuesday= 2, etc.)

Return Codes:

0	- Execution complete - no errors
1	- Invalid console type
2	- Insufficient free storage for execution
24	- Invalid filemode given
28	- No files found for search arguments
36	- Disk not accessed

VMSIZE

This command determines the size of the user's virtual storage, converts it to K bytes, and returns the value as the CMS return code. For example, if issued in a 1 megabyte virtual machine, the return code from VMSIZE is 1024.

The command syntax is:

```
VMSIZE
```

Note: All parameters are ignored by this module.

WAKEUP

This command is designed to control the operation of an event driven virtual machine (typically a disconnected service machine) by entering a wait state until an event occurs. Optional parameters are used to specify event types. These may include waiting for reader files, VMCF or SMSG messages, or a time of day (which may include a date or day of week). The return code indicates the event that occurred.

The command syntax is:

```
WAKEUP <at> <hh:mm<:ss>>  <(options>
       <+<hh:>mm<:ss>>  <(options>
```

where:

hh:mm<:ss>

refers to the time of day the module is to restart the virtual machine. The format of the parm is fixed, but the seconds (including the ":") are optional and default to ":00." The return code is 2 if the restart is because of this parameter, but this time (and return code) may be overridden if some other event occurs first.

+<hh:>mm<:ss>

specifies an offset from the current time-of-day when the machine is to be restarted. The parameter must begin with a + sign. The hours (including the : character) are optional and need only be specified if needed. The seconds are also optional and default to ":00." Some valid forms are:

+10   = wakeup in 10 minutes from now.

+30:30   = wakeup in 30 minutes and 30 seconds.

+02:30:0   = wakeup in 2 hours and 30 minutes.

The return code is 2 if the restart is because of this parameter, but this time (and return code) may be overridden if some other event occurs first.

Options:

FILE <(fn <ft <fm>> <)>>

if specified with no parameters, the FILE option causes WAKEUP to search the file "WAKEUP TIMES *" for the next wakeup time. The fileid to be searched may be explicitly specified in parentheses immediately following the FILE parameter.

The WAKEUP TIMES file may be fixed or variable length with a maximum LRECL of 255.

WAKEUP examines each record in the file using the following criteria:

1. The record is skipped if it should not be executed today.

2. The record is skipped if it has already been executed today.

3. The record is used if the execution time on the record is closer to the current time than a previously selected record.

If a record is found with a time earlier than the current time, WAKEUP stacks the record and returns immediately. If the time hasn't passed, WAKEUP compares the wakeup time on the record with the HH:MM:SS or +MM form passed on the command, and waits until the shortest of the two intervals has passed before returning.

To keep track of which records have been executed, WAKEUP time or date stamps an 8-byte field following the HH:MM:SS field with the

time or date the record was last executed. This means that the
WAKEUP TIMES file MUST be on a R/W disk. See the section
"The Wakeup Times file" following this description for the format of
the file entries.

When a file item is the cause of the wakeup, the line from the file is
stacked, and WAKEUP exits with the return code set to 3.

When FILE is specified, WAKEUP will always stack the line from the
file before exiting (or a null line if none was found), even if the cause
of the wakeup was not timer expiration. The stacked line has the
following format:

> * recno record-from-file

where "recno" is the record number of the line in the file.

VMCF or SMSG
> Allows the virtual machine to receive special messages while it is
> running. However, WAKEUP will only begin saving these messages if
> an SMSG is is received when "WAKEUP (SMSG" is activated and
> waiting to receive an SMSG. Once the SMSG has been received, all
> following SMSGs received will be recognized by WAKEUP.
>
> **Note:** To prevent entering "DEBUG" when an SMSG is retrieved,
> the user must issue WAKEUP with the "NOEXT" option, which may
> be issued either before issuing "SMSG," or in the same statement:
> "WAKEUP (NOEXT SMSG."
>
> The module issues a VMCF AUTHORISE for any user, and provides
> a 130 character buffer to receive the message. Only the SENDX form
> of data transfer is accepted, and other forms are rejected without
> further examination. The message is stacked, and the command exits
> with the return code set to 1. The stacked line has one of the
> following forms (noting how the message was sent):
>
> > *VMCF userid message-text ... ...
> >   or
> > *SMSG userid message-text ... ...

TIME
> causes the current date and time to be stacked on exit. If this is the
> only option, the WAKEUP exits with the return code set to 2. The
> stacked line has the format:
>
> > * mm/dd/yy hh:mm:ss

RDR
> waits for a file in the virtual reader. The file must be of the same class
> as the spool class of the reader (use CP SPOOL RDR CLASS * to
> wake up for files of any class). If a file of the correct class is already
> present in the reader, the module will exit immediately. The return
> code is 4.

CONS

waits for an attention interrupt from the virtual console (caused by entering something and hitting the ENTER key, or by hitting the ENTER key twice without entering anything. This allows an easy method of correctly ending a waiting condition at any time. The return code is set to 6.

Note: The CONS option is implied in any WAKEUP parameter that waits for some event, and need only be explicitly specified when no other options are given.

CC

causes the clock comparator, rather than the interval timer, to be used for timer events. This option requires the invoking virtual machine to have the "OPTION ECMODE" directory entry.

NOEXT

prevents entry to "DEBUG" when an external interrupt is generated, such as when a VMCF or SMSG is received.1

This option takes effect immediately and may be reset with the RESEXT option.

RESEXT

resets the external interrupt handler to the default CMS condition (enter DEBUG if an external interrupt is received). This is useful only following the NOEXT option.

Note: As a part of the initialization process, WAKEUP replaces the I/O new PSW (and also the External new PSW if options VMSG, SMSG, or some form of timed wakeup is selected) with a PSW pointing to its own interrupt handler. Because of this, operation should never be ended by HX, since the module will not be allowed to restore the normal contents of these PSWs, and CMS will probably not be able to continue normally. If the program must be stopped using HX, always re-IPL CMS before attempting to continue normal operations.

Items Stacked by WAKEUP

Four WAKEUP options cause data to be stacked: TIME, FILE, SMSG, and VMCF. The lines are always stacked in the following order, regardless of the order they appeared on the command invocation:

1. Current date and time

2. Line from WAKEUP TIMES file, or an asterisk (*) if no line found

3. SMSG or VMCF message

WAKEUP Action at Midnight

When using the FILE option, you should be sure to use either a "relative" time on the command or a "relative" time in the file, or have a time near midnight in the file that will cause your application to wait until midnight has passed before re-invoking WAKEUP.

If one of these options is not used then when all the times in the file have been processed, the next time WAKEUP is invoked with the FILE option, it will immediately return with return code of 207.

The default WAKEUP PARMS file has

"ALL   23:58:00 01/01/01   MSG01"

as the last entry. This entry is intended to force events scheduled past midnight. A similar entry is required for every CMS function wishing to use WAKEUP PARMS that schedule events after midnight.

Return Codes

Normal (describe cause of wakeup) -

RC = 1   - VMCF/SMSG received and stacked
    2   - Specified time period has elapsed
    3   - A time from the timer file has been reached
    4   - A reader file of the proper class has arrived
    6   - Interrupt from the virtual console
  100   - Return code from ? or null parm
  101   - Empty file in card reader, RDR option (FSREAD RC=1)
  103   - Unknown error from card rdr, RDR option (FSREAD RC=3)

Messages (describe conditions) -

```
RC = 1,5 - DTRWAK001I * userid ...message-text...
     ...   DTRWAK002I hh:mm:ss WAKEUP IN (nn SEC)
     ...   DTRWAK002I hh:mm:ss WAKEUP AT hh:mm:ss (nn SEC)
     2-6 - DTRWAK002I * ...line from WAKEUP TIMES file...
     ...   DTRWAK003I External interrupts turned off
     ...   DTRWAK004W External interrupts already turned off
     ...   DTRWAK005I External interrupts reset
     ...   DTRWAK006W External interrupts NOT reset
       1 - DTRWAK007I *VMCF userid ...message text...
       1 - DTRWAK007I *SMSG userid ...message text...
      28 - DTRWAK028E File WAKEUP TIMES * not found
     200 - DTRWAK200E Invalid option "........"
     201 - DTRWAK201E Reader not operational
     202 - DTRWAK202E Error nnn from "CP SPOOL RDR HOLD"
     203 - DTRWAK203E Invalid hours field
     204 - DTRWAK204E Invalid minutes field
     205 - DTRWAK205E Invalid seconds field
     206 - DTRWAK206E Invalid "...." in time parameter "...."
     207 - DTRWAK207E Error nnn reading file "........"
     208 - DTRWAK208E Error nnn from VMCF authorize
     209 - DTRWAK209E SENDX data exceeds 100 characters
     210 - DTRWAK210E VMCF data transfer error
     211 - DTRWAK211E Error nnn writing file "........"
     212 - DTRWAK212I Invalid time "..." in "........" record "...."
     213 - DTRWAK213E File "........" must be on a R/W disk.
     214 - DTRWAK214E PSW error - Re-IPL CMS and Restart
```

The WAKEUP TIMES File

Entries in the WAKEUP TIMES file are coded as follows:

1	10	19	28 (when stacked)
ALL MM/DD/YY ==/DD/YY ==/==/== ==/01/==	HH:MM:SS HH:MM:SS HH:MM:SS HH:MM:SS HH:MM:SS	datestamp datestamp datestamp datestamp datestamp	user-text (once a day) user-text (once) user-text (once a month) user-text (once a day) user-text (on the 1st)
dayofweek WEEKEND S-S WEEKDAY M-F	HH:MM:SS HH:MM:SS HH:MM:SS HH:MM:SS HH:MM:SS	datestamp datestamp datestamp datestamp datestamp	user-text (once a week) user-text (on weekends) user-text (same as above) user-text (on weekdays) user-text (same as above)
==/==/== WEEKEND WEEKDAY dayofweek M-F	+05 +10:30 +20 +5 +02:30:0	timestamp timestamp timestamp timestamp timestamp	user-text (every 5 minutes) user-text (" 10 min 30 sec weekends) user-text (" 20 mins weekdays) user-text (" 5 mins on day) user-text (" 150 mins on weekdays)

Figure 38. File for WAKEUP TIMES

Field Descriptions

The first field begins in column 1 and is 8 bytes long (you must abbreviate
WEDNESDAY as WEDNESDA). This field specifies the "window" during which
the times in the second field are valid.

The second field begins in column 9 and is also 8 bytes long, and is used to specify
the time-of-day when WAKEUP is to stack the entry.

The third field is used by WAKEUP for the time or date stamp, and is 8 bytes long.
WAKEUP does not examine any of the record after the stamp field, so an
application can put its own data there.

File Entry Formats

The first form means "wakeup at HH:MM:SS only on MM/DD/YY." If an "="
appears instead of a number in the date field, it is replaced by the same number
from today's date, before any more checks are made. So, for example,
==/10/== 08:00:00 means "wake up on the 10th of the month at 8 0'clock."

The second form means "wakeup at HH:MM:SS only on this day of the week."
For example, SATURDAY 12:05:00 means wakeup every Saturday at 12:05:00.

The third form specifies wakeup times as offsets from the current time, rather than
explicit time-of-day coding. When this form is used, the events are repeated at the
given interval for the complete period specified by the first field.

When a line can only be stacked once (because an explicit MM/DD/YY appears in the first field), WAKEUP flags the line when writing the datestamp into the file, indicating that the line won't be used again. The line is flagged by changing the first field from MM/DD/YY to MM.DD/YY. This allows a "clean up" program to occasionally eliminate unused lines from the wakeup file.

Sample WAKEUP Parms File

```
************************************************************************
*                                                                    *
*  THIS IS THE DEFAULT "WAKEUP PARMS" FILE THAT IS SUPPLIED WITH      *
*  THE VM/370 IPO/E SYSTEM FOR THE VIRTUAL MACHINE "VMUTIL."          *
*                                                                    *
*  NOTE THAT THERE ARE 4 FIELDS IN THIS FILE:                        *
*                                                                    *
*  FIELD 1:   COLUMNS 01 TO 03  --  DAYS OF THE WEEK                  *
*  FIELD 2:   COLUMNS 10 TO 17  --  TIME OF DAY                       *
*  FIELD 3:   COLUMNS 19 TO 26  --  LAST DATE THAT LINE WAS EXECUTED  *
*  FIELD 4:   COLUMNS 28 TO 80  --  ANY CP/CMS/EXEC COMMAND           *
*                                                                    *
*  VALID PARAMETERS:                                                 *
*                                                                    *
*  FIELD 1:                                                          *
*            "ALL"  -- EXECUTE THIS LINE EVERY DAY OF THE WEEK        *
*            "MON"  -- EXECUTE THIS LINE ONLY ON MONDAYS             *
*            "TUE"  -- EXECUTE THIS LINE ONLY ON TUESDAYS            *
*            "WED"  -- EXECUTE THIS LINE ONLY ON WEDNESDAYS          *
*            "THU"  -- EXECUTE THIS LINE ONLY ON THURSDAYS           *
*            "FRI"  -- EXECUTE THIS LINE ONLY ON FRIDAYS             *
*            "SAT"  -- EXECUTE THIS LINE ONLY ON SATURDAYS           *
*            "SUN"  -- EXECUTE THIS LINE ONLY ON SUNDAYS             *
*            "M-F"  -- EXECUTE THIS LINE ONLY MONDAY THRU FRIDAY     *
*            "S-S"  -- EXECUTE THIS LINE ONLY SATURDAYS AND SUNDAYS  *
*                                                                    *
*  FIELD 2:                                                          *
*                                                                    *
*            HH:MM:SS -- THIS FIELD CONTAINS THE TIME THAT           *
*                        YOU WANT THE COMMAND TO BE EXECUTED         *
*                                                                    *
*  FIELD 3:                                                          *
*                                                                    *
*            MM/DD/YY  -- THIS FIELD CONTAINS THE LAST DATE THAT     *
*                         THE COMMAND WAS EXECUTED.  THIS IS TO      *
*                         INSURE THAT IF IT WAS EXECUTED ONCE ON     *
*                         THAT DAY, IT WON'T BE EXECUTED AGAIN       *
*                         IN CASE "VMUTIL" MUST BE RE-STARTED.       *
*                         THIS FIELD IS UPDATED BY "VMUTIL" AFTER THE*
*                         COMMAND LINE IS EXECUTED.                  *
*                                                                    *
*  FIELD 4:                                                          *
*                                                                    *
*            CP/CMS/EXEC COMMAND                                     *
*                        -- PLACE ANY COMMAND TO BE EXECUTED IN THIS *
*                           FIELD.                                   *
*                                                                    *
*            NOTE:  IF THE KEY ENTRY "MSG01" IS ENTERED IN FIELD 4   *
*                   WHERE THE COMMAND LINE IS ENTERED, A MESSAGE     *
*                   TO THE OPERATOR WILL BE SENT STATING THE CURRENT *
*                   DATE AND TIME.                                   *
```

```
*                                                                                    *
*                      IF THE COMMAND BEING ISSUED IS A CMS COMMAND,                  *
*                      THE COMMAND MUST BE PREFIXED WITH "CMS".                       *
*                                                                                    *
*                      IF THE COMMAND BEING ISSUED IS A CP COMMAND,                   *
*                      THE COMMAND MUST BE PREFIXED WITH "CP".                        *
*                                                                                    *
*                      IF THE COMMAND BEING ISSUED IS AN EXEC,                        *
*                      THE COMMAND MUST BE PREFIXED WITH "EXEC".                      *
*                                                                                    *
*                      "VMUTIL" GENERATES A LOG FILE OF ALL TRANSACTIONS              *
*                      THAT TAKES PLACE, IT IS NAMED "VMUTIL LOG AO".                 *
*                      IN THIS "WAKEUP PARMS" FILE IT IS PRINTED AND                  *
*                      ERASED AT 08:00:00 HOURS.                                      *
*                                                                                    *
*                      IF THERE IS AN "*" IN COLUMN 1 OF THIS FILE, THE               *
*                      LINE IS TREATED AS A COMMENT AND IS NOT EXECUTED.              *
*                                                                                    *
**************************************************************************************
ALL       01:00:00 04/19/79
ALL       02:00:00 04/19/79
ALL       03:00:00 04/19/79
ALL       04:00:00 04/19/79
ALL       05:00:00 04/19/79
ALL       06:00:00 04/19/79
M-F       07:00:00 04/19/79 CP AUTOLOG IBMCE IBMCE
ALL       08:00:00 04/18/79 MSG01
ALL       08:00:00 04/18/79 CMS PRINT VMUTIL LOG
ALL       08:00:00 04/18/79 CMS ERASE VMUTIL LOG
ALL       09:00:00 04/18/79
ALL       10:00:00 04/18/79 MSG01
ALL       11:00:00 04/18/79
ALL       12:00:00 04/18/79 MSG01
ALL       13:00:00 04/18/79
ALL       14:00:00 04/18/79 MSG01
ALL       15:00:00 04/18/79
MON       15:00:00 01/01/01 CP MSG OP PLEASE BACKUP THE VMSRES DASD TONIGHT
WED       15:00:00 04/18/79 CP MSG OP PLEASE BACKUP THE VMIPFE DASD TONIGHT
FRI       15:00:00 01/01/01 CP MSG OP PLEASE BACKUP THE VMPK01 DASD TONIGHT
ALL       16:00:00 04/18/79 MSG01
ALL       17:00:00 01/01/01 CP ACNT ALL CLOSE
ALL       18:00:00 01/01/01 MSG01
ALL       19:00:00 01/01/01
ALL       20:00:00 01/01/01 MSG01
ALL       21:00:00 01/01/01
ALL       22:00:00 01/01/01 MSG01
ALL       23:00:00 01/01/01
ALL       23:00:00 01/01/01 MSG01
ALL       23:00:05 01/01/01
ALL       23:58:00 01/01/01 MSG01
```

XRDR

Although the XRDR module is provided, it is recommended that the VM/SP RDR command is used instead.

The XRDR command examines the first file in the virtual reader, and stacks or prints a line describing the fileid, method to use for loading, type of file, and so on. Only files of the current reader spool class are examined. XRDR also handles MAIL files.

The command syntax is:

```
XRDR <options>
```

If called without options, information regarding the first non-held reader file of the active class is displayed. This requires spooling the reader with HOLD, reading the first record of the spool file, closing the reader, and spooling the reader NOHOLD, which may change the state of the virtual reader before executing XRDR. If the file is an RMSG file (first line beginning X'FE',C"MSG") or punch file with a filetype of MAIL, the complete file is displayed and then purged from the reader. The text of the message is also logged in the MAIL LOG A0 file unless the NOLOG option is given. All file-types other than RMSG or MAIL remain in the reader after the command is complete.

Options:

STACK   causes the information that would have been displayed to be stacked (typically for access by an EXEC). For RMSG or MAIL files, however, only a single descriptive line is stacked, rather than the complete message text.

NOLOG   prevents the logging of RMSG or MAIL files in a mail log file on disk. The message is displayed, but no further action is taken, and the file is purged from the reader.

NOMSG   suppresses the normal display of all text, including RMSG and MAIL files. For RMSG or MAIL files, logging still occurs (if not suppressed by the NOLOG option).

Return Codes:

0   - Reader is empty
1   - Active RDR class is empty
2   - Unnamed print file
3   - Disk load FN FT
4   - Readcard FN FT
5   - IPL deck
6   - Unnamed card deck
7   - Read FN FT (print file)
8   - Not used

9   - Reader no operational
10   - "?" or invalid option
11   - Not used
12   - Error in XRDR
13   - RMSG/MAIL file
14   - Not used
15   - Unknown type

Message (describe conditions) -

RC = 12 - DMSDSK121E Reader file held: Contains multiple decks.
                 To read these files in using the RDR exec,
                 answer "* *" to the question
                 "Enter Fn Ft: Y, Enter, or Purge"

Use RDR to determine the characteristics of the next file in your virtual reader. RDR generates a return code and either displays or stacks a message for each type of file recognized. The command syntax is:

```
RDR SPOOL-CLASS ( NOTYPE, STACK FIFO|LIFO, FIFO, LIFO
```

Refer to *CMS Command and Macro Reference* for details.

YDISK

Although the YDISK module is provided, it is recommended that the VM/SP RECEIVE command is used instead.

The YDISK command is a change of the CMS disk command that allows parameters to be specified with DISK LOAD. All other functions are unchanged from the standard DISK module.

The command syntax is:

```
YDISK LOAD <fn | * <ft | * <fm>>>
```

where:

fn ft fm   specify the new filename, filetype and filemode to be assigned the LOADed file. Any of these may be coded as "*" to use the default values contained in the DUMPed file (the filemode defaults to A1). No checking is done to determine if the given fileid already exists.

                Refer to *CMS Command and Macro Reference Manual* for return codes.

Note: If multiple logical files are contained in the spool file, and a new filename or filetype is given, only the first file is loaded. The spool file is held, and a message is issued explaining the situation.

Part 5. Panel Lists and Panel Hierarchy

8

Chapter 8. List of Panels by Panelids

PANELID	PANEL TITLE
ACT$	ACCOUNTING - (PRIMARY)
ACT$51	SYSTEM ACCOUNTING: PRINT ACCOUNTING REPORT
APL$	VS APL
APP$	APPLICATION LIBRARY
CBT$Y	COMPUTER BASED TRAINING
CBT$1Y	TAKING A COMPUTER BASED TRAINING COURSE
CBT$1YX	STUDENT/AUTHOR A COMPUTER BASED TRAINING COURSE
CBT$2Y	WRITING A COMPUTER BASED TRAINING COURSE
CMF$	CREATE OR MODIFY FILE
COM$	FORMAT OR PRINT FILE
COM$BTCH	UPDATE CMSBATCH SETTINGS
DIR$P	USE DIRECTORY MAINTENANCE - (PRIMARY)
DIR$1P	WORK WITH A USER'S DIRECTORY ENTRY
DIR$11P	ADD A USER TO THE SYSTEM ·
DIR$111P	ADD A LINK FOR THE NEW USER
DIR$12P	REMOVE A USER FROM THE SYSTEM
DIR$13P	CHANGE A USERID ON THE SYSTEM
DIR$14P	CHANGE A USER'S LOGON PASSWORD
DIR$15P	CHANGE A USER'S STORAGE SIZE
DIR$16P	ASK FOR A COPY OF A USER'S DIRECTORY ENTRY
DIR$17P	REPLACE A USER'S DIRECTORY ENTRY
DIR$2P	WORK WITH MINIDISKS
DIR$21P	ALLOCATE A NEW MINIDISK
DIR$211P	ADD A MINIDISK BY EXTENT
DIR$212P	ADD A MINIDISK BY VOLUME SERIAL NUMBER
DIR$213P	ADD A MINIDISK BY GROUP NAME
DIR$214P	ADD A MINIDISK AS A TEMPORARY DISK
DIR$22P	REMOVE A MINIDISK FROM A USER
DIR$23P	MOVE A MINIDISK
DIR$231P	MOVE A MINIDISK BY EXTENT
DIR$232P	MOVE A MINIDISK BY VOLUME SERIAL NUMBER
DIR$233P	MOVE A MINIDISK BY GROUP NAME
DIR$234P	MOVE A TEMPORARY MINIDISK
DIR$24P	TRANSFER A MINIDISK
DIR$25P	ADD A LINK FROM ONE USER TO ANOTHER
DIR$26P	DROP A LINK TO ANOTHER USER'S MINIDISK
DIR$27P	CHANGE A MINIDISK PASSWORD OR ACCESS MODE
DIR$28P	CHANGE THE ADDRESS OF A MINIDISK
DIR$3P	LOOK AT DIRECTORY STATUS INFORMATION
DIR$31P	ASK FOR A COPY OF THE CP DIRECTORY

PANELID	PANEL TITLE
DIR$32P	LIST THE AVAILABLE DISK SPACE
DIR$33P	LIST THE USED DISK SPACE
DIR$34P	CHECK THE STATUS OF USERS OR DATAMOVE
DIR$36P	LIST THE PENDING MINIDISK OPERATIONS
DIR$37P	TELL THE SYSTEM THAT A MINIDISK WAS COPIED
DIR$4P	CORRECT DIRECTORY MAINTENANCE PROBLEMS
DIR$41P	UNLOCK A USER'S DIRECTORY ENTRY
DIR$46P	CANCEL OR RETRY A WORK UNIT
DIR$47P	DELETE AN ENTRY FROM THE ERROR LOG FILE
DIR$5P	USE THE CP DIRECTORY MAP
DIR$51P	CREATE A NEW CP DIRECTORY MAP
DIR$511P	CREATE A NEW CP DIRECTORY MAP (CONTINUED)
DIR$52P	BROWSE THE CP DIRECTORY MAP
DIR$53P	PRINT THE CP DIRECTORY MAP
DIREADP	WORK IN PROGRESS
DIR0AP	CHANGE YOUR LOGON STORAGE SIZE
DIR0BP	CHANGE YOUR DISTRIBUTION CODE
DIR0P	UPDATE YOUR DIRECTORY
DIR04P	AUTOMATIC IPL WHEN YOU LOGON
DIR05P	AUTOMATIC DISK LINK WHEN YOU LOGON
DIR06P	PREVENT ACCESS TO YOUR DISK
DIR08P	CHANGE YOUR DISK PASSWORDS
DIR09P	CHANGE YOUR DISK MODE
DMS$	DISPLAY MANAGEMENT SYSTEM/CMS
DTR$P	SYSTEM ADMINISTRATOR TASKS - (PRIMARY)
EPV$73	EP/VS PRODUCT TAILORING
EPV$731	DEFINE EP/VS
EPV$732	SUBCHANNEL ADDRESS LIMITS, 1 ADAPTER
EPV$733	SUBCHANNEL ADDRESS LIMITS, 2 ADAPTERS
EPV$734	SCANNER TYPE AND WRAPAROUND TEST LINE
EPV$735	OSCILLATOR RATES
EPV$736	LINE NAME, ADDRESS, AND SPEED
EPV$737	TERMINAL TYPE AND SUBCHANNEL ADDRESSES
EPV$738	FILENAME OF MACRO FILE
EPV$7381	GENERATE EP/VS
EPV$7382	EP/VS STATUS
EPV$7383	SAVE EP/VS
EPV$7384	CONTROL PROGRAM NAME
EUA$	APPLICATION SUPPORT
EUA$DISE	PRODUCT IS NOT INSTALLED

PANELID	PANEL TITLE
GDM$	GRAPHICAL DATA DISPLAY MANAGER UTILITIES
GMD$3	GDDM PRINT UTILITY
IDM$ACC1	ACCESSING ANOTHER USER'S DISK
IDM$ACC2	ACCESS DISK OPTIONS
IDM$CPY1	COPY A FILE
IDM$CPY3	NEW FILE IDENTIFICATION
IDM$CPY4	COPY OPTIONS
IDM$CPY5	COPY PART OF A FILE
IDM$CPY6	LINE CHANGING OPTIONS
IDM$DIS1	FILE INFORMATION
IDM$DSK1	GET A DISK
IDM$EDT1	EDIT FILE INFORMATION
IDM$FID1	FILE INFORMATION
IDM$FID2	FILE INFORMATION
IDM$FILE	MANAGE FILES
IDM$GNRC	GENERAL VM/SP TASKS
IDM$GTD1	GET TEMPORARY DISK SPACE
IDM$LB	USE LIBRARIES
IDM$LB1A	CREATE/UPDATE MACRO LIBRARY
IDM$LB2A	BROWSE A MACRO LIBRARY
IDM$LB3A	COMPRESS A MACRO LIBRARY
IDM$LB4A	GET MAP OF MACRO LIBRARY
IDM$LB5A	CREATE/UPDATE A TEXT LIBRARY
IDM$LB6A	GET MAP OF TEXT LIBRARY
IDM$LST1	LISTING OPTIONS
IDM$NRM1	USING COMMANDS
IDM$NRM2	LOOK AT A LIST OF YOUR LAST COMMANDS
IDM$NRM3	GET HELP FOR A COMMAND
IDM$PRT1	FILE PRINTING OPTIONS
IDM$PRT2	COMBINING PRINTOUTS
IDM$REN1	RENAME - NEW FILE ID
IDM$REN2	FILE RENAMING OPTIONS
IDM$RSCS	QUERY RSCS
IDM$SND1	TAPE TO READER
IDM$SPL1	CHANGE DEVICE STATUS
IDM$SPL2	CONSOLE OPTIONS
IDM$SPL3	READER OPTIONS
IDM$SPL4	SPECIAL OPTIONS
IDM$SRT	SORT A FILE
IDM$ST	QUERY OR CHANGE STATUS

PANELID	PANEL TITLE
IDM$ST1A	QUERY SYSTEM AND USER STATUS
IDM$ST3A	CHANGE TERMINAL OPTIONS
IDM$ST5A	ASSIGN SYNONYM TABLES
IDM$ST5B	ASSIGN A USER SYNONYM TABLE
IDM$TAP1	USE A TAPE
IDM$TAP2	REWIND A TAPE
IDM$TAP3	TAPE POSITIONING
IDM$TAP4	TAPE SCAN INFORMATION
IDM$TAP5	WRITE A TAPE MARK
IDM$TAP6	TAPE OPTIONS
IDM$TAP7	MOUNT A TAPE
IDM$TAP8	DETACH A TAPE
IDM$URD1	MANAGE YOUR VIRTUAL DEVICES
IDM$URD2	DEVICE SELECTION
IDM$URD3	CHANGING HOLD STATUS
IDM$URD4	TRANSFER A FILE
IDMUSERP	GENERAL USE OPTIONS - (PRIMARY)
IPFFCMDP	APPLICATION COMMAND TABLE DISPLAY / PRINT
IPFFIPFP	ISPF DIALOG MANAGER SERVICES
IPFFXD1P	CHANGE FIRST APPLICATION EXEC
IPFOPTA	ISPF DEFAULTS DIALOG
IPFUCMX	ISPF COMMAND TABLE DIALOG
OLI$	ONLINE INFORMATION
OLI$R1	ONLINE DOCUMENTS
OPS$	SYSTEM OPERATOR TASKS - (PRIMARY)
OPS$RSCS	RSCS NETWORK ACTIVITIES
OPS$11	MANAGE LOGON AND WARNING MESSAGES
OPS$115	SEND A WARNING MESSAGE TO USERS
OPS$12P	SHUT DOWN THE OPERATING SYSTEM
OPS$2	MANAGE NETWORK COMMUNICATIONS
OPS$21	ENABLE OR DISABLE LOCAL TERMINALS AND LINES
OPS$22	ENABLE OR DISABLE REMOTE TERMINALS AND LINES
OPS$23	LOAD A COMMUNICATION CONTROL PROGRAM
OPS$24	DUMP COMMUNICATION CONTROLLER CONTENTS
OPS$25	SHOW THE STATUS OF THE NETWORK
OPS$26	STOP NETWORK COMMUNICATIONS
OPS$3	MANAGE SPOOL FILES AND DEVICES
OPS$31	CONTROL PROCESSING OF SPOOL FILES
OPS$311	CHANGE ORDER OF SPOOL FILE PROCESSING
OPS$312	PURGE SPOOL FILES

PANELID	PANEL TITLE
OPS$313	PROCESS EXTRA COPIES OF A SPOOL FILE
OPS$314	FLUSH SPOOL FILES FROM AN OUTPUT DEVICE
OPS$315	RELEASE SPOOL FILES FROM HOLD STATUS
OPS$316	PUT SPOOL FILES IN HOLD STATUS
OPS$32	COPY SPOOL FILES TO AND FROM TAPE
OPS$321	STOP PROCESSING AFTER CURRENT FILE
OPS$322	STOP PROCESSING IMMEDIATELY
OPS$323	LIST FILES ON A SPOOL FILE TAPE
OPS$324	READ SPOOL FILES FROM TAPE
OPS$325	WRITE SPOOL FILES TO TAPE
OPS$33	MANAGE SPOOL INPUT AND OUTPUT DEVICES
OPS$331	CHANGE PRINTER CHARACTERISTICS
OPS$332	BACKSPACE A PRINTER OR PUNCH
OPS$333	SET A PRINTER TO SINGLE SPACE OUTPUT
OPS$334	START PRINTERS, PUNCHES, AND READERS
OPS$335	STOP PRINTERS, PUNCHES, AND READERS
OPS$34	DISPLAY UNPROCESSED SPOOL FILES
OPS$4	ASSIGN A DEVICE TO A USER
OPS$5	TAKE A DEVICE AWAY FROM A USER
OPS$6	BACK UP SYSTEM AND USER FILES
OPS$6P	UTILITY LOGON PASSWORD
OPS$7	RESTORE USER FILES
OPS$8	EVALUATE AND MANAGE RESOURCES
OPS$81	DISPLAY SYSTEM RESOURCE USAGE
OPS$812	DISPLAY A USER'S SYSTEM USAGE
OPS$82	LOCK PAGES IN MAIN STORAGE
OPS$83	FREE LOCKED PAGES FROM MAIN STORAGE
OPS$84	SET PRIVILEGED SYSTEM ACTIVITIES
OPS$841	SET FAVORED PROCESSING
OPS$842	ESTABLISH DISPATCHING PRIORITY
OPS$843	RESERVE OR RETURN PAGES
OPS$844	ACTIVATE ASSIST FEATURES
OPS$845	ASSIGN DEVICE TO RECEIVE DUMP
OPS$85	LOG A USER OFF THE SYSTEM
OPS$86	HALT INPUT OR OUTPUT ON A DEVICE
OPS$87	LOCATE CONTROL BLOCK ADDRESSES
OPS$9	DISPLAY STATUS OF SYSTEM RESOURCES
PER$	PERSONAL COMPUTING
RGFDEFP	DEFAULT SETTINGS
RGFDEFPA	COMMAND DEFAULTS

PANELID	PANEL TITLE
RGFILEP	COMMUNICATING WITH OTHERS
RGFMSGP	SEND A MESSAGE
RGFNOTEP	SEND A NOTE
RGGMAD0	ADD REPORT DESCRIPTION
RGGMDI0	PROBLEM REPORT DISPLAY
RGGMPM0	PROBLEM MANAGEMENT - (PRIMARY)
RGGMRE1	PRINT PROBLEM REPORTS
RGGMRE2	PRINT PROBLEM REPORTS
RGGMSE0	CHOOSE PROBLEM REPORT
RGGMSE1	CHOOSE PROBLEM REPORT
RGGMSM2	PROBLEM REPORT SUMMARY
RGGMSM3	PROBLEM REPORT SUMMARY
RGGMST0	CHANGE PROBLEM STATUS
RGGRAD0	ADD REPORT DESCRIPTION
RGGRCR0	CREATE PROBLEM REPORT
RGGRCR1	CONTINUE PROBLEM DESCRIPTION
RGGRCR2	GIVE PROBLEM SEVERITY
RGGRCR3	GIVE PROBLEM TYPE
RGGRDE0	DELETE PROBLEM REPORT
RGGRDI0	PROBLEM REPORT DISPLAY
RGGRPM0	PROBLEM REPORTING
RGGRRE1	PRINT PROBLEM REPORTS
RGGRRE2	PRINT PROBLEM REPORTS
RGGRSE0	CHOOSE PROBLEM REPORT
RGGRSE1	CHOOSE PROBLEM REPORT
RGGRSM2	PROBLEM REPORT SUMMARY
RGGRSM3	PROBLEM REPORT SUMMARY
RGGRST0	CHANGE PROBLEM STATUS
RGGUAS0	ASSIGN PROBLEM LOCALLY
RGGUCL0	CLOSE PROBLEM REPORT
RGGURE0	CHOOSE REPORTS TO PRINT
RGGUSM0	CHOOSE REPORTS TO SUMMARIZE
RGGUSM1	CHOOSE SUMMARY METHOD
RGGUSR0	SORT PROBLEM REPORTS
RGGUSV0	CHANGE PROBLEM SEVERITY
RSC$	MANAGE RSCS - (PRIMARY)
RSC$1	DISPLAY THE STATUS OF A REMOTE SYSTEM
RSC$2	DISPLAY THE STATUS OF YOUR RSCS SYSTEM
RSC$21	DISPLAY THE STATUS OF A LINKID
RSC$22	DISPLAY INFORMATION ABOUT A FILE

PANELID	PANEL TITLE
RSC$3	CHANGE YOUR RSCS SYSTEM
RSC$31	ADD A LINK (OR ROUTE) TO THE RSCS DIRECTORY
RSC$31A	LINK TO A VM SYSTEM USING BSC
RSC$31B	LINK TO AN MVS SYSTEM OR VSE/POWER VERSION 2
RSC$31C	LINK TO A 3270 INFORMATION DISPLAY SYSTEM PRINTER
RSC$31D	LINK TO A NONPROGRAMMABLE TERMINAL
RSC$31E	LINK TO A PROGRAMMABLE REMOTE STATION
RSC$31F	LINK TO A VSE/POWER VERSION 1
RSC$31G	LINK TO A VM SYSTEM USING CTCA
RSC$311	ADD A LINK TO THE RSCS DIRECTORY
RSC$312	ADD A ROUTE TO THE RSCS DIRECTORY
RSC$313	CHANGE THE NAME OF YOUR RSCS SYSTEM
RSC$32	DELETE A LINK (OR ROUTE) FROM THE RSCS DIRECTORY
RSC$321	DELETE A LINK FROM THE RSCS DIRECTORY
RSC$322	DELETE A ROUTE FROM THE RSCS DIRECTORY
RSC$331	START AN RSCS LINK
RSC$332	STOP AN RSCS LINK
RSC$333	RESTART ALL OF RSCS
RSPMAD0	ADD REPORT DESCRIPTION
RSPMAP0	WRITE AN APAR
RSPMAU0	AUTHORIZE A REMOTE SITE FOR PROBLEM SOLVING
RSPMAU1	CHOOSE AN AUTHORIZED SITE
RSPMAU2	ADD A SITE
RSPMAU3	AUTHORIZED SITE DISPLAY
RSPMAU4	CHANGE DATA FOR A SITE
RSPMAU5	ERASE A SITE
RSPMDI0	PROBLEM REPORT DISPLAY
RSPMES0	CHOOSE REPORTS TO ERASE
RSPMES1	ERASE PROBLEM REPORTS
RSPMES2	CHOOSE REPORTS TO ERASE
RSPMES3	ERASE PROBLEM REPORTS
RSPMIE0	ERASE A DUMP
RSPMIP0	USE IPCS TO PROCESS A DUMP
RSPMMP0	CONVERT LOAD MAP FOR IPCS USE
RSPMPM0	PROBLEM ADMINISTRATION - (PRIMARY)
RSPMPO0	CREATE CUSTOMER PROFILE
RSPMRE1	PRINT PROBLEM REPORTS
RSPMRE2	PRINT PROBLEM REPORTS
RSPMSE0	CHOOSE PROBLEM REPORT
RSPMSE1	CHOOSE PROBLEM REPORT

PANELID	PANEL TITLE
RSPMSM2	PROBLEM REPORT SUMMARY
RSPMSM3	PROBLEM REPORT SUMMARY
RSPMST0	CHANGE PROBLEM STATUS
RSPMUA0	DISPLAY UNASSIGNED REPORT
RSPMUA1	DISPLAY UNASSIGNED REPORT
RSPMXA0	ASSIGN PROBLEM TO A REMOTE SITE
RSTACTP	CHANGE WHEN THE ACCOUNTING REPORT IS PRINTED
RSTDPRP	CHOOSE A DIFFERENT PRINTER
RSTDSKP	MAKE A DISK AVAILABLE TO DIRMAINT
RSTFADP	INITIALIZE OR LABEL A DISK
RSTLRP	SYSTEM CHANGES YOU CAN MAKE - (PRIMARY)
RSTSCLP	CHANGE THE PRINTER CLASSES
RSTUFP	CHANGE HOW THE PRINTING LOOKS
TXT$	TEXT PROCESSING
TXT$DCR1	CREATE TEXT
TXT$DCR2	CREATE TEXT DESCRIPTION
TXT$DDE1	DELETE TEXT
TXT$DDE2	CONFIRM REQUEST TO DELETE A TEXT FILE
TXT$DMO1	MODIFY TEXT
TXT$DMO2	MODIFY TEXT DESCRIPTION
TXT$DPR1	PRINT TEXT
TXT$DRE1	REVIEW TEXT
TXT$MCR1	CREATE MEMO
TXT$MCR2	CREATE MEMO DESCRIPTION
TXT$MDE1	DELETE MEMO
TXT$MDE2	CONFIRM REQUEST TO DELETE A MEMO
TXT$MMO1	MODIFY MEMO
TXT$MMO2	MODIFY MEMO DESCRIPTION
TXT$MPR1	PRINT MEMO
TXT$MRE1	REVIEW MEMO
TXT$XCM1	CREATE OR MODIFY A FILE
TXT$XCM2	CREATE OR MODIFY FILE DESCRIPTION
TXT$XDE1	DELETE FILE
TXT$XDE2	CONFIRM REQUEST TO DELETE A FILE
TXT$1	MEMO PREPARATION
TXT$2	TEXT PREPARATION
VSB$	VS BASIC
010$2B	OUTPUT DISTRIBUTION
010$2	PROCEDURES GUIDE
010$22	INFORMATION SOURCES

PANELID	PANEL TITLE
010$23	SOFTWARE CONFIGURATION
010$24	HARDWARE CONFIGURATION
010$25	SYSTEM ACCESS
010$26	SECURITY
010$29	SYSTEM BACKUP
100$CS	APPLY CORRECTIVE SERVICE TO YOUR SYSTEM
100$CSA	UPDATE AND ASSEMBLE SOURCE CODE
100$CSU	UPDATE A MACRO LIBRARY
100$N5	BUILD AND LOAD A CP NUCLEUS
100$N6	BUILD AND LOAD A CMS NUCLEUS
100$ST	TAILOR YOUR SYSTEM
100$3	SYSTEM SUPPORT - (PRIMARY)
100$36	RESTORE A DISCONTIGUOUS SHARED SEGMENT
100$4	SERVICE, REFRESH, or TAILOR CP and CMS
100$41	REFRESH VM/SP
100$44	APPLY VM/SP SERVICE
100$52	SERVICE PROGRAM PRODUCTS

Chapter 9. List of Panels by Titles

PANEL TITLE	PANELID
ACCESS DISK OPTIONS	IDM$ACC2
ACCESSING ANOTHER USER'S DISK	IDM$ACC1
ACCOUNTING	ACT$ - (PRIMARY)
ACTIVATE ASSIST FEATURES	OPS$844
ADD A LINK FOR THE NEW USER	DIR$111P
ADD A LINK FROM ONE USER TO ANOTHER	DIR$25P
ADD A LINK (OR ROUTE) TO THE RSCS DIRECTORY	RSC$31
ADD A LINK TO THE RSCS DIRECTORY	RSC$311
ADD A MINIDISK AS A TEMPORARY DISK	DIR$214P
ADD A MINIDISK BY EXTENT	DIR$211P
ADD A MINIDISK BY GROUP NAME	DIR$213P
ADD A MINIDISK BY VOLUME SERIAL NUMBER	DIR$212P
ADD A ROUTE TO THE RSCS DIRECTORY	RSC$312
ADD A SITE	RSPMAU2
ADD A USER TO THE SYSTEM	DIR$11P
ADD REPORT DESCRIPTION	RGGMAD0
ADD REPORT DESCRIPTION	RGGRAD0
ADD REPORT DESCRIPTION	RSPMAD0
ALLOCATE A NEW MINIDISK	DIR$21P
APPLICATION COMMAND TABLE DISPLAY / PRINT	IPFFCMDP
APPLICATION LIBRARY	APP$
APPLICATION SUPPORT	EUA$
APPLY CORRECTIVE SERVICE TO YOUR SYSTEM	100$CS
APPLY VM/SP SERVICE	100$44
ASK FOR A COPY OF THE CP DIRECTORY	DIR$31P
ASK FOR A COPY OF A USER'S DIRECTORY ENTRY	DIR$16P
ASSIGN A DEVICE TO A USER	OPS$4
ASSIGN A USER SYNONYM TABLE	IDM$ST5B
ASSIGN PROBLEM LOCALLY	RGGUAS0
ASSIGN PROBLEM TO REMOTE SITE	RSPMXA0
ASSIGN SYNONYM TABLES	IDM$ST5A
ASSIGN DEVICE TO RECEIVE DUMP	OPS$845
AUTHORIZE A REMOTE SITE FOR PROBLEM SOLVING	RSPMAU0
AUTHORIZED SITE DISPLAY .	RSPMAU3
AUTOMATIC DISK LINK WHEN YOU LOGON	DIR05P
AUTOMATIC IPL WHEN YOU LOGON	DIR04P
BACK UP SYSTEM AND USER FILES	OPS$6
BACKSPACE A PRINTER OR PUNCH	OPS$332
BROWSE A MACRO LIBRARY	IDM$LB2A
BROWSE THE CP DIRECTORY MAP	DIR$52P

PANEL TITLE	PANELID
BUILD AND LOAD A CMS NUCLEUS	100$N6
BUILD AND LOAD A CP NUCLEUS	100$N5
CANCEL OR RETRY A WORK UNIT	DIR$46P
CHANGE A MINIDISK PASSWORD OR ACCESS MODE	DIR$27P
CHANGE A USER'S LOGON PASSWORD	DIR$14P
CHANGE A USER'S STORAGE SIZE	DIR$15P
CHANGE A USERID ON THE SYSTEM	DIR$13P
CHANGE DATA FOR A SITE	RSPMAU4
CHANGE DEVICE STATUS	IDM$SPL1
CHANGE FIRST APPLICATION EXEC	IPFFXD1P
CHANGE HOW THE PRINTING LOOKS	RSTUFP
CHANGE ORDER OF SPOOL FILE PROCESSING	OPS$311
CHANGE PRINTER CHARACTERISTICS	OPS$331
CHANGE PROBLEM SEVERITY	RGGUSV0
CHANGE PROBLEM STATUS	RGGMST0
CHANGE PROBLEM STATUS	RGGRST0
CHANGE PROBLEM STATUS	RSPMST0
CHANGE TERMINAL OPTIONS	IDM$ST3A
CHANGE THE ADDRESS OF A MINIDISK	DIR$28P
CHANGE THE NAME OF YOUR RSCS SYSTEM	RSC$313
CHANGE THE PRINTER CLASSES	RSTSCLP
CHANGE WHEN THE ACCOUNTING REPORT IS PRINTED	RSTACTP
CHANGE YOUR DISK MODE	DIR09P
CHANGE YOUR DISK PASSWORDS	DIR08P
CHANGE YOUR DISTRIBUTION CODE	DIR0BP
CHANGE YOUR LOGON STORAGE SIZE	DIR0AP
CHANGE YOUR RSCS SYSTEM	RSC$3
CHANGING HOLD STATUS	IDM$URD3
CHECK THE STATUS OF USERS OR DATAMOVE	DIR$34P
CHOOSE A DIFFERENT PRINTER	RSTDPRP
CHOOSE AN AUTHORIZED SITE	RSPMAU1
CHOOSE PROBLEM REPORT	RGGMSE0
CHOOSE PROBLEM REPORT	RGGMSE1
CHOOSE PROBLEM REPORT	RGGRSE0
CHOOSE PROBLEM REPORT	RGGRSE1
CHOOSE PROBLEM REPORT	RSPMSE0
CHOOSE PROBLEM REPORT	RSPMSE1
CHOOSE REPORTS TO ERASE	RSPMES0
CHOOSE REPORTS TO ERASE	RSPMES2
CHOOSE REPORTS TO PRINT	RGGURE0

PANEL TITLE	PANELID
CHOOSE REPORTS TO SUMMARIZE	RGGUSM0
CHOOSE SUMMARY METHOD	RGGUSM1
CLOSE REPORT PROBLEM	RGGUCL0
COMBINING PRINTOUTS	IDM$PRT2
COMMAND DEFAULTS	RGFDEFPA
COMMUNICATING WITH OTHERS	RGFILEP
COMPRESS A MACRO LIBRARY	IDM$LB3A
COMPUTER BASED TRAINING	CBT$Y
CONFIRM REQUEST TO DELETE A FILE	TXT$XDE2
CONFIRM REQUEST TO DELETE A MEMO	TXT$MDE2
CONFIRM REQUEST TO DELETE A TEXT FILE	TXT$DDE2
CONSOLE OPTIONS	IDM$SPL2
CONTINUE PROBLEM DESCRIPTION	RGGRCR1
CONTROL PROCESSING OF SPOOL FILES	OPS$31
CONTROL PROGRAM NAME	EPV$7384
CONVERT LOAD MAP FOR IPCS USE	RSPMMP0
COPY A FILE	IDM$CPY1
COPY OPTIONS	IDM$CPY4
COPY PART OF A FILE	IDM$CPY5
COPY SPOOL FILES TO AND FROM TAPE	OPS$32
CORRECT DIRECTORY MAINTENANCE PROBLEMS	DIR$4P
CREATE A NEW CP DIRECTORY MAP	DIR$51P
CREATE A NEW CP DIRECTORY MAP (CONTINUED)	DIR$511P
CREATE CUSTOMER PROFILE	RSPMPO0
CREATE MEMO	TXT$MCR1
CREATE MEMO DESCRIPTION	TXT$MCR2
CREATE OR MODIFY A FILE	TXT$XCM1
CREATE OR MODIFY FILE	CMF$
CREATE OR MODIFY FILE DESCRIPTION	TXT$XCM2
CREATE PROBLEM REPORT	RGGRCR0
CREATE TEXT	TXT$DCR1
CREATE TEXT DESCRIPTION	TXT$DCR2
CREATE/UPDATE MACRO LIBRARY	IDM$LB1A
CREATE/UPDATE A TEXT LIBRARY	IDM$LB5A
DEFAULT SETTINGS	RGFDEFP
DEFINE EP/VS	EPV$731
DELETE A LINK FROM THE RSCS DIRECTORY	RSC$321
DELETE A LINK (OR ROUTE) FROM THE RSCS DIRECTORY	RSC$32
DELETE A ROUTE FROM THE RSCS DIRECTORY	RSC$322
DELETE AN ENTRY FROM THE ERROR LOG FILE	DIR$47P

PANEL TITLE	PANELID
DELETE FILE	TXT$XDE1
DELETE MEMO	TXT$MDE1
DELETE PROBLEM REPORT	RGGRDE0
DELETE TEXT	TXT$DDE1
DETACH A TAPE	IDM$TAP8
DEVICE SELECTION	IDM$URD2
DISPLAY A USER'S SYSTEM USAGE	OPS$812
DISPLAY INFORMATION ABOUT A FILE	RSC$22
DISPLAY MANAGEMENT SYSTEM/CMS	DMS$
DISPLAY STATUS OF SYSTEM RESOURCES	OPS$9
DISPLAY SYSTEM RESOURCE USAGE	OPS$81
DISPLAY THE STATUS OF A LINKID	RSC$21
DISPLAY THE STATUS OF A REMOTE SYSTEM	RSC$1
DISPLAY THE STATUS OF YOUR RSCS SYSTEM	RSC$2
DISPLAY UNASSIGNED REPORT	RSPMUA0
DISPLAY UNASSIGNED REPORT	RSPMUA1
DISPLAY UNPROCESSED SPOOL FILES	OPS$34
DROP A LINK TO ANOTHER USER'S MINIDISK	DIR$26P
DUMP COMMUNICATION CONTROLLER CONTENTS	OPS$24
EDIT FILE INFORMATION	IDM$EDT1
ENABLE OR DISABLE LOCAL TERMINALS AND LINES	OPS$21
ENABLE OR DISABLE REMOTE TERMINALS AND LINES	OPS$22
EP/VS PRODUCT TAILORING	EPV$73
EP/VS STATUS	EPV$7382
ERASE A DUMP	RSPMIE0
ERASE A SITE	RSPMAU5
ERASE PROBLEM REPORTS	RSPMES1
ERASE PROBLEM REPORTS	RSPMES3
ESTABLISH DISPATCHING PRIORITY	OPS$842
EVALUATE AND MANAGE RESOURCES	OPS$8
FILE INFORMATION	IDM$DIS1
FILE INFORMATION	IDM$FID1
FILE INFORMATION	IDM$FID2
FILE PRINTING OPTIONS	IDM$PRT1
FILE RENAMING OPTIONS	IDM$REN2
FILENAME OF MACRO FILE	EPV$738
FLUSH SPOOL FILES FROM AN OUTPUT DEVICE	OPS$314
FORMAT OR PRINT FILE	COM$
FREE LOCKED PAGES FROM MAIN STORAGE	OPS$83
GDDM PRINT UTILITY	GMD$3

PANEL TITLE	PANELID
MANAGE LOGON AND WARNING MESSAGES	OPS$11
MANAGE NETWORK COMMUNICATIONS	OPS$2
MANAGE RSCS	RSC$ - (PRIMARY)
MANAGE SPOOL FILES AND DEVICES	OPS$3
MANAGE SPOOL INPUT AND OUTPUT DEVICES	OPS$33
MANAGE YOUR VIRTUAL DEVICES	IDM$URD1
MEMO PREPARATION	TXT$1
MODIFY MEMO	TXT$MMO1
MODIFY MEMO DESCRIPTION	TXT$MMO2
MODIFY TEXT	TXT$DMO1
MODIFY TEXT DESCRIPTION	TXT$DMO2
MOUNT A TAPE	IDM$TAP7
MOVE A MINIDISK	DIR$23P
MOVE A MINIDISK BY EXTENT	DIR$231P
MOVE A MINIDISK BY GROUP NAME	DIR$233P
MOVE A MINIDISK BY VOLUME SERIAL NUMBER	DIR$232P
MOVE A TEMPORARY MINIDISK	DIR$234P
NEW FILE IDENTIFICATION	IDM$CPY3
ONLINE DOCUMENTS	OLI$R1
ONLINE INFORMATION	OLI$
OSCILLATOR RATES	EPV$735
OUTPUT DISTRIBUTION	010$2B
PERSONAL COMPUTING	PER$
PREVENT ACCESS TO YOUR DISK	DIR06P
PRINT MEMO	TXT$MPR1
PRINT PROBLEM REPORTS	RGGMRE1
PRINT PROBLEM REPORTS	RGGMRE2
PRINT PROBLEM REPORTS	RGGRRE1
PRINT PROBLEM REPORTS	RGGRRE2
PRINT PROBLEM REPORTS	RSPMRE1
PRINT PROBLEM REPORTS	RSPMRE2
PRINT TEXT	TXT$DPR1
PRINT THE CP DIRECTORY MAP	DIR$53P
PROBLEM ADMINISTRATION	RSPMPM0 - (PRIMARY)
PROBLEM MANAGEMENT	RGGMPM0 - (PRIMARY)
PROBLEM REPORT DISPLAY	RGGMDI0
PROBLEM REPORT DISPLAY	RGGRDI0
PROBLEM REPORT DISPLAY	RSPMDI0
PROBLEM REPORT SUMMARY	RGGMSM2
PROBLEM REPORT SUMMARY	RGGMSM3

PANEL TITLE	PANELID
PROBLEM REPORT SUMMARY	RGGRSM2
PROBLEM REPORT SUMMARY	RSPMSM3
PROBLEM REPORT SUMMARY	RSPMSM2
PROBLEM REPORT SUMMARY	RGGRSM3
PROBLEM REPORTING	RGGRPM0
PROCEDURES GUIDE	010$2
PROCESS EXTRA COPIES OF A SPOOL FILE	OPS$313
PRODUCT IS NOT INSTALLED	EUA$DISE
PURGE SPOOL FILES	OPS$312
PUT SPOOL FILES IN HOLD STATUS	OPS$316
QUERY OR CHANGE STATUS	IDM$ST
QUERY RSCS	IDM$RSCS
QUERY SYSTEM AND USER STATUS	IDM$ST1A
READ SPOOL FILES FROM TAPE	OPS$324
READER OPTIONS	IDM$SPL3
REFRESH VM/SP	100$41
RELEASE SPOOL FILES FROM HOLD STATUS	OPS$315
REMOVE A MINIDISK FROM A USER	DIR$22P
REMOVE A USER FROM THE SYSTEM	DIR$12P
RENAME - NEW FILE ID	IDM$REN1
REPLACE A USER'S DIRECTORY ENTRY	DIR$17P
RESERVE OR RETURN PAGES	OPS$843
RESTART ALL OF RSCS	RSC$333
RESTORE A DISCONTIGUOUS SHARED SEGMENT	100$36
RESTORE USER FILES	OPS$7
REVIEW MEMO	TXT$MRE1
REVIEW TEXT	TXT$DRE1
REWIND A TAPE	IDM$TAP2
RSCS NETWORK ACTIVITIES	OPS$RSCS
SAVE EP/VS	EPV$7383
SCANNER TYPE AND WRAPAROUND TEST LINE	EPV$734
SECURITY	010$26
SEND A MESSAGE	RGFMSGP
SEND A NOTE	RGFNOTEP
SEND A WARNING MESSAGE TO USERS	OPS$115
SERVICE PROGRAM PRODUCTS	100$52
SERVICE, REFRESH, OR TAILOR CP AND CMS	100$4
SET A PRINTER TO SINGLE SPACE OUTPUT	OPS$333
SET FAVORED PROCESSING	OPS$841
SET PRIVILEGED SYSTEM ACTIVITIES	OPS$84

PANEL TITLE	PANELID
SHOW THE STATUS OF THE NETWORK	OPS$25
SHUT DOWN THE OPERATING SYSTEM	OPS$12P
SOFTWARE CONFIGURATION	010$23
SORT A FILE	IDM$SRT
SORT PROBLEM REPORTS	RGGUSR0
SPECIAL OPTIONS	IDM$SPL4
START AN RSCS LINK	RSC$331
START PRINTERS, PUNCHES, AND READERS	OPS$334
STOP AN RSCS LINK	RSC$332
STOP NETWORK COMMUNICATIONS	OPS$26
STOP PRINTERS, PUNCHES, AND READERS	OPS$335
STOP PROCESSING AFTER CURRENT FILE	OPS$321
STOP PROCESSING IMMEDIATELY	OPS$322
STUDENT/AUTHOR A COMPUTER BASED TRAINING COURSE	CBT$1YX
SUBCHANNEL ADDRESS LIMITS, 1 ADAPTER	EPV$732
SUBCHANNEL ADDRESS LIMITS, 2 ADAPTERS	EPV$733
SYSTEM ACCESS	010$25
SYSTEM ACCOUNTING: PRINT ACCOUNTING REPORT	ACT$51
SYSTEM ADMINISTRATOR TASKS	DTR$P - (PRIMARY)
SYSTEM BACKUP	010$29
SYSTEM CHANGES YOU CAN MAKE	RSTLRP - (PRIMARY)
SYSTEM OPERATOR TASKS	OPS$ - (PRIMARY)
SYSTEM SUPPORT	100$3 - (PRIMARY)
TAILOR YOUR SYSTEM	100$ST
TAKE A DEVICE AWAY FROM A USER	OPS$5
TAKING A COMPUTER BASED TRAINING COURSE	CBT$1Y
TAPE OPTIONS	IDM$TAP6
TAPE POSITIONING	IDM$TAP3
TAPE SCAN INFORMATION	IDM$TAP4
TAPE TO READER	IDM$SND1
TELL THE SYSTEM THAT A MINIDISK WAS COPIED	DIR$37P
TERMINAL TYPE AND SUBCHANNEL ADDRESSES	EPV$737
TEXT PREPARATION	TXT$2
TEXT PROCESSING	TXT$
TRANSFER A FILE	IDM$URD4
TRANSFER A MINIDISK	DIR$24P
UNLOCK A USER'S DIRECTORY ENTRY	DIR$41P
UPDATE A MACRO LIBRARY	100$CSU
UPDATE AND ASSEMBLE SOURCE CODE	100$CSA
UPDATE CMSBATCH SETTINGS	COM$BTCH

PANEL TITLE	PANELID
UPDATE YOUR DIRECTORY	DIR0P
USE A TAPE	IDM$TAP1
USE DIRECTORY MAINTENANCE	DIR$P - (PRIMARY)
USE LIBRARIES	IDM$LB
USE IPCS TO PROCESS A DUMP	RSPMIP0
USE THE CP DIRECTORY MAP	DIR$5P
USING COMMANDS	IDM$NRM1
UTILITY LOGON PASSWORD	OPS$6P
VS APL	APL$
VS BASIC	VSB$
WRITING A COMPUTER BASED TRAINING COURSE	CBT$2Y
WORK IN PROGRESS	DIREADP
WORK WITH A USER'S DIRECTORY ENTRY	DIR$1P
WORK WITH MINIDISKS	DIR$2P
WRITE A TAPE MARK	IDM$TAP5
WRITE AN APAR	RSPMAP0
WRITE SPOOL FILES TO TAPE	OPS$325

Chapter 10. Panel Hierarchies

> **Note:**
> Pages 241 — 244 (foldout pages) are located inside the back
> cover of the book.

(DTR$P) —— (Primary)

System Administration Tasks

5

(100$3) —— (Primary)

System Support

1 (100$4) — Service, Refresh or Tailor CP/CMS

2 (100$52) — Service Program Products

3 (EPV$73) — EP/VS Product Tailoring

4 Review System Profile

5 (DIR$5P) — Use CP Directory Map

6 (100$36) — Restore a Discontiguous Shared Segment

Under Service, Refresh or Tailor CP/CMS:

1 (100$41) — Refresh VM/SP

2 (100$44) — Apply VM/SP Service

3 (100$CS) — Apply Corrective Service

4 (100$ST) — Tailor Your System

5 (100$N5) — Build and Load CP Nucleus

6 (100$N6) — Build and Load CMS Nucleus

7 Read CP Load Map From Reader

8 Read CMS Load Map From Reader

Under Apply VM/SP Service:

1 (SYSCSV) — Explain How To Apply APAR To Your System

2 (SYSCSM) — Explain How To Apply APAR To Macro Library

3 (SYSSCZ) — Explain How To Apply A ZAP

4 (100$CSU) — Update a Macro Library

5 (100$CSA) — Update and Assemble Source Code

Under EP/VS Product Tailoring:

1 (EPV$731) — Define EP/VS

2 (CMF$) — Create or Modify File

3 (EPV$7381) — Generate EP/VS

4 (EPV$7383) — Save EP/VS

Under Define EP/VS:

(EPV$732) — Subchannel Address Limits 1 Adapter

(EPV$733) — Subchannel Address Limits 2 Adapters

(EPV$734) — Scanner Type & Wraparound Test Line

(EPV$735) — Oscillator Rates

(EPV$736) — Line Name, Address and Speed

(EPV$737) — Terminal Type & Subchannel Address

(EPV$738) — Filename of Macro File

Under Generate EP/VS:

(EPV$7384) — Control Program Name

(EPV$7382) — EP/VS Status

(DTR$P)————(Primary)

System
Administration
Tasks

4

(RSC$)————(Primary)

Manage RSCS

1
(RSC$2)
Display
Status of
RSCS System

2
(RSC$3)
Change
RSCS
System

3
(RSC$1)
Display
Status of
Remote System

1
(RSC$21)
Display
Status
of Linkid

2
(RSC$22)
Display File
Information

3
Display
Only Active
Links

4
Display
all Links

5
Display
Available
Ports

6
Display
Queue
Count

7
Display
Routing
Table

1
(RSC$31)
Add Link or
Route to
Directory

2
(RSC$32)
Delete Link
or Route
From Directory

3
(RSC$331)
Start
RSCS Link

4
(RSC$332)
Stop
RSCS Link

5
(RSC$333)
Restart
all of RSCS

6
(RSC$313)
Change Name
of RSCS
System

1
(RSC$311)
Add Link
to RSCS
Directory

2
(RSC$312)
Add Route
to RSCS
Directory

1
(RSC$321)
Delete Link
From RSCS
Directory

2
(RSC$322)
Delete Route
From RSCS
Directory

1
(RSC$31A)
Link to VM
System
Using BSC

2
(RSC$31G)
Link to VM
System
Using CTCA

3
(RSC$31B)
Link to MVS
System or
VSE/POWER 2

4
(RSC$31F)
Link to
VSE/POWER
Version 1

5
(RSC$31C)
Link to 3270
Display
Printer

6
(RSC$31D)
Link to Non-
programmable
Terminal

7
(RSC$31E)
Link to
Programmable
Station

Glossary

A

Active File. A file that is currently being sent to another computer system using RSCS.

APAR. Authorized program analysis report. A form you fill out to report defects in an IBM program. The program must be *unaltered*. If you, or anyone in your company, has changed any of the code in the program, IBM is not responsible for fixing it. This is true even if the code you changed didn't have any effect on the problem.

Assemble. To take instructions as you understand them and put them together or translate them so the computer can use them. The computer uses the instructions to build a program to do work for you.

Authorized program analysis report (APAR). A form you fill out to report defects in an IBM program. The program must be *unaltered*. If you, or anyone in your company, has changed any of the code in the program, IBM is not responsible for fixing it. This is true even if the code you changed didn't have any effect on the problem.

B

Binary synchronous communication (BSC). A method of communicating with a remote system. BSC used a standardized set of control characters and control character sequences to synchronously transmit binary-coded information.

BSC. (Binary synchronous communication) A method of communicating with a remote system. BSC used a standardized set of control characters and control character sequences to synchronously transmit binary-coded information.

C

Channel-to-channel adapter (CTCA). A device that connects two channels. You use channels to send and receive information to and from another computer system.

CMS Nucleus map. A part of storage that contains the locations of modules, text decks, and code for CMS. Once a nucleus is built and loaded into your reader, these locations are available to your system.

Count Key Data (CKD). A disk storage device that stores data in the format: count field, usually followed by a key field, followed by the actual data of a record. The count field contains, among others, the address of the record in the format CCHHR (CC = cylinder number, HH = head number, R = record number) and the length of the data; the key field contains the record's key (search argument).

CP Nucleus Map. A part of storage that contains the locations of modules, text decks, and code for CP. Once a nucleus is built and loaded into your reader, these locations are available to your system.

CTCA. (Channel-to-channel adapter) A device that connects two channels. You use channels to send and receive information to and from another computer system.

D

DATAMOVE. A virtual machine (or "user") that is responsible for cleaning and copying minidisks.

DCSS. Discontiguous save segments. A 64K segment of storage that can be shared among virtual machines if the segments contain reentrant code.

Default. The system's attempt to guess what you want.

Delete. To erase something on the system.

Directory (RSCS). A file that lists all the links, routes, and other information that RSCS needs to let your system communicate with other systems.

Discontiguous save segments. (DCSS) A 64K segment of storage that can be shared among virtual machines if the segments contain reentrant code.

E

Emulation Program/Virtual System. (EP/VS) Emulation Programs are control programs that manage the operations of the 3704 and 3705 Communications Controller which controls the transmission of data over lines in a network. These programs allow a given computer system to execute programs written for another controller.

EP/VS. Emulation Program/Virtual System. Emulation Programs are control programs that manage the operations of the 3704 and 3705 Communications Controller which controls the transmission of data over lines in a network. These programs allow a given computer system to execute programs written for another controller.

Error Message. Words sent to you by the system that tell you there's a problem. Either the system couldn't understand what you were telling it to do, or the system understood but wasn't able to do it for you. You will see error messages on the next-to-last line of your panel (above the command line).

F

File. (1) (noun) A body of information stored under a single name. For example, you can think of VM/IPF as a big filing cabinet, and its "files" contain information you would put in a manila folder. (2) (verb) To store information (usually on a disk).

I

Inactive File. A file that is waiting to be sent to another computer system using RSCS.

Initial program load. The beginning procedure that causes an operating system to start operating.

IPL. Initial program load. The beginning procedure that causes an operating system to start operating.

IPL CMS. Initial program load of Conversational Monitor System.

L

Link. (1) (noun) A direct connector between two separate items. For example, the link between your toaster and the electrical socket is the electrical cord from the toaster. In a computer system a link can be physical (like these cords), or it can be imaginary (like the link the computer creates between one user and another to share information). (2) (verb) To connect two or more separate items.

Linkid. A one- to eight-character "name" for a link.

Local Name. Your system's nodeid.

M

M. Megabyte. An abbreviation for two to the twentieth power or 1,048,576. This term is used to shorten long numbers. For example, if you need 2,097,152 bytes of storage, it is easier to say "2M."

Maclib. An abbreviation for "Macro Library." A library that contains macros, copy files, or source program statements for use under CMS.

Member. A single part (like a macro) of a maclib.

Memo to Users. Memos with step-by-step instructions for applying updates. They are contained on the system PUT tape.

Minidisk. A piece of a disk. You can divide one disk into many minidisks and assign each one to a different user.

N

Nodeid. A one- to eight-character "name" for a computer system.

Nucleus. That part of a control program that is permanently located in main storage.

P

Password. A unique code that guards your information from others. During installation, it is possible to change a password's minimum length, but the maximum length is always eight characters.

Program. A list of instructions telling (step-by-step) a computer to do some task. A program consists primarily of commands to the system, but it can also have data to be processed or comments (which are ignored by the system) describing how the program or a section of the program works.

Program update tape. A tape containing service updates for VM/SP and other licensed program products.

Q

Queue. A list of files or programs waiting to be processed. Queues process information according to the FIFO rule (First In, First Out). For example, in a printer queue, the files are waiting for their turn to be printed.

R

Reader. A virtual device that holds files other people send you until you're ready to "read" (or load) them in.

Received Password. A one- to eight-character password that allows information to be received from a remote system to your system.

Reentrant Code. A program code that can be used by more than one computer at the same time.

Refresh. To replace a program with a new copy without changing either the sequence or results of processing.

Remote Line Password. A one- to eight-character line password that allows information to be received from a remote system to your system. This password must be given to you by the other system at line connection time.

Remote Node Password. A one- to eight-character node password that allows information to be received from a remote system to your system. This password must be given to you by the other system at line connection time.

Remote System. Any computer system that is not the one you're currently working on.

Remote Spooling Communications Subsystem (RSCS). An IBM Program Product that lets you communicate with other computer systems.

Route. An indirect connector between two separate items. For example, let's say you have to go to the drugstore. Now, if the drugstore was next door, you'd probably only have one way of getting there. You'd walk out your front door, turn right (or left), and you'd be there. But, let's say the drugstore is across the street. You can't jaywalk, because the police station is right next to the drugstore. So, you have two choices. You can walk out of your house, turn right, go to the corner, cross the street, and walk to the drugstore. Or, you can turn left and cross the street. You can't go directly to the drugstore, you have to cross an intersection. This is what a route is like. You can't get to the other system directly. You have to go through one or more systems (intersections) to get there.

Routing Table. A list of all the routes (and what links they use) available on your system.

RSCS. Remote Spooling Communications Subsystem. An IBM Program Product that lets you communicate with other computer systems.

RSCS Directory. A file that lists all the links, routes, and other information that RSCS needs to let your system communicate with other systems.

S

Service. (1) (noun) A customer or product-related business function such as installation planning, maintenance, or programming assistance. (2) (verb) To provide the functions described above.

Shared Segments. A feature of a saved system that allows one or more segments of reentrant code in real storage to be shared among many virtual machines.

System. The people, products, and methods forming a working unit. For example, in a highway system, there are people, cars (products), and driving regulations (methods) to form the working unit. In VM/IPF, you, your computer hardware (products), and your software (methods) form a working unit.

System Profile. A file that shows the activity performed (install, refresh, or tailor), the date and time the change was made, and which product was affected.

System Residence Volume. A disk pack in real storage that contains the CP nucleus, as well as other resources of your operating system. When you IPL your system, this nucleus is loaded onto a disk for you to use.

T

Tape. A magnetic ribbon that records information. Here, a tape is like a tape on a reel-to-reel stereo system. Tapes come in various sizes and use various machines, but they all record information.

Transmitted Line Password. A one- to eight-character line password given by you to a remote system at line connection time.

Transmitted Node Password. A one- to eight-character node password given by you to a remote system at line connection time.

Transmitted Password. A one- to eight-character password that allows information to be transferred from your system to a remote system.

U

Userid. The one- to eight-character name that the computer recognises as you. "Userid" is an abbreviation for "user identification." In many companies, the userid is a person's last name (or a portion of it), first initial, and middle initial.

V

Verify. To determine whether an operation is working correctly.

VMFASM. An EXEC that updates a source file. This EXEC uses IBM updates, PTFs, and user updates.

VMFMAC. An EXEC that updates macro libraries.

Volume Serial Number. A one- to six-character "name" for a disk.

Z

ZAP. A CMS command that changes or dumps MODULE, LOADLIB, or TXTLIB files.

Index

A

ACCOUNT 174
ACTIVE 119
active link 117
adding
    link 90-106
    route 113
ADMIN 36, 37
APAR 75
applying
    APAR fix 75
    service
        corrective 74
        program products 82-83
        VM/SP PUT tape 71-73
    ZAP 76
assemble source code 79-80
AT-APL 102
AT-TEXT 102
AUTOLOG1 37, 40
available port 118

B

binary synchronous communication 90-92
BROWSE
    PF Key Settings 181
    Prefix Function 181
    Profile 181-182
    Program Access Keys 181
    Return Codes 182
    Subcommands
        / 180
        ? 181
        = 180-181
        BACKWARD 176
        BOTTOM 176
        CASE 176-177
        DICT 177
        DOWN/NEXT 177
        DSPF 177
        ENTER 178
        FORWARD 178
        LEFT 178
        MEMBER 178-179
        n 180
        QUIT 179
        RIGHT 179
        SET 179
        TOP 179-180
        UP 180
        VIEW 180
    Using a Browse Profile 181-182
BSC 90-92
buffer size 91, 102
building nucleus
    CMS 68-70
    CP 65-67

C

calculating size of CPRM's 192 disk 24, 25
changing RSCS system name 116
channel-to-channel adapter 93-94
CLRSCRN 182
CMS
    building nucleus 68-70
    loading nucleus 68-70
    refreshing 63-64
    servicing 71-73
CMSBATCH 40
corrective service 74
CP
    building nucleus 65-67
    loading nucleus 65-67
    refreshing 63-64
    servicing 71-73
CPFMT 183
CPRM 41
CPU 123-124
CTCA 93-94

D

DA-APL 102
DA-TEXT 102
DCSSBKUP 184
DCSSRSAV 185
DEF 120
deleting
    link 107-108
    route 114
DEPRINT 185
DEVTYPE 186
directory
    changing existing entries
        if DIRMAINT is installed 17
        if DIRMAINT is not installed 18
    creating and adding new entries
        if DIRMAINT is installed 17
        if DIRMAINT is not installed 18
    entries
        $ALLOC$ 19
        ADMIN 19
        AUTOLOG1 20
        CPRM 20
        DATAMOVR 20
        DIRMAINT 20
        DISKACNT 20
        IIPS 21
        ISPVM 21
        MAINT 22
        OPERATNS 22
        OPERATOR 23
        OP1 23
        RSCS 23
        SYSDUMP1 23
        VMUTIL 24
    RSCS
        adding links 89-106
        adding route 113
        deleting link 107
        deleting route 114
DIRMAINT 41, 42

DIRMAP
    Calling DIRMAP 187-188
    Input Files 188-189
    Output Files 189-190
    Requirements and Restrictions 190
    Return Codes 190
discontiguous shared segments 87-88
DISKACNT 42, 43
displaying
    CPU status 123-124
    file information 117, 121-122
    linkid status 117, 119-120
    links 117-118
    log message 124
    port 118
    queue count 118
    remote system status 123-124
    routing table 118
    RSCS status 117-118
    time 124
DMKRIO requirements 11
DMKSNT requirements 11, 12
DMKSYS requirements 11

E

EP/VS product tailoring 84-85

F

FILES 120
FILESTCK 191
FINDSTAK 192
FLIST
    Input Areas 199-201
    Options 195-196
    PA and PF Keys 199
    Profile 201-202
    Return Codes 202
    Subcommands
        /Bottom 196
        /Cancel 196
        /Dspf 196
        /Enter 196
        /Help 197
        /Level 197
        /n<nnnn> 198
        /Omit 197
        /Quit 197
        /Sort 197-198
        /Top 198
        ? 198
        = 198

G

GETFMADR 202

H

hardware requirements 4

I

installation of other products, notes
    ADRS II 9
    DCF 8
    DIRMAINT 7, 8
    DMS/CMS 9
    EP/VS 8
    FPS II 9
    GDDM & PGF 9, 10
    IIAS 10
    IIPS 10
    IPCS Extended 8
    ISPF 7
    ISPF/PDF 10
    ISPVM 7, 43, 44
    QBE 10
    RSCS 8, 9
    VS APL 10
    VS BASIC 10
installation of VM/IPF release 5
    stage 1 27, 30, 34
installation requirements
    hardware 4
    software 5, 6
IPFFIPF DEFAULT2 file 54, 57
ISPDCSS shared segment
    ISPSAVE exec 11
    sample entry for ISPF 11

L

linkid
    adding
        to MVS 95-97
        to nonprogrammable terminal 103-104
        to programmable remote station 105-106
        to VM 90-92, 93-94
        to VSE/POWER 95-97, 98-99
        to 3270 printer 100-102
    deleting 107-108
    starting 109-110
    status 117, 119-120
    stopping 111-112
links
    deleting 107-108
    displaying 117-118
    linkid status 117, 119-120
    starting 109-110
    stopping 111-112
    to MVS 95-97
    to nonprogrammable terminal 103-104
    to programmable remote station 105-106
    to VM 90-92, 93-94
    to VSE/POWER 95-97, 98-99
    to 3270 printer 100-102
listing all users 124
loading nucleus
    CMS 68-70
    CP 65-67
local name 116
log message 124
logon, checking remote user 124

U

updating 77, 80
user
    memo 71
    remote 124
USERID 209

V

VFC 101
virtual 3800 files 92, 94, 97
VM 121
VMSERV 71
VMSIZE 210
VMUTIL 50, 51
VSE/POWER system 95-99

W

WAKEUP
    Action at Midnight 213-214
    Field Descriptions 215
    File Entry Formats 215-216
    Items Stacked by WAKEUP 213
    Return Codes 214
    Sample WAKEUP Parms File 217-218

TIMES file 215

X

XNL 101
XRDR 219

Y

YDISK 220

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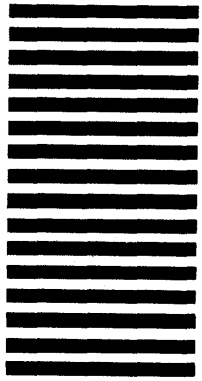
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