Program Directory for

IBM Debug Tool for z/VM

Version 4 Release 1.0

Program Number 5654-A23

for Use with
z/VM™ Version 4 Release 4
z/VM™ Version 5 Release 1

Document Date: September 2004

GI10-8669-00

Note

Before using this information and the product it supports, be sure to read the general information under “Notices” on page 44.

This program directory, dated September 2004, applies to the IBM® Debug Tool for z/VM™ Version 4 Release 1.0, Program Number 5654-A23.

A form for reader's comments appears at the back of this publication. When you send information to IBM, you grant IBM a nonexclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

Contents

Figures

1.0 Introduction

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

The program directory contains the following sections:

- 2.0, “Program Materials” on page 2 identifies the basic and optional program materials and documentation for Debug Tool.
- 3.0, “Program Support” on page 6 describes the IBM support available for Debug Tool.
- 4.0, “Program and Service Level Information” on page 7 lists the APARs (program level) and PTFs (service level) incorporated into Debug Tool.
- 5.0, “Installation Requirements and Considerations” on page 8 identifies the resources and considerations for installing and using Debug Tool.
- 6.0, “Installation Instructions” on page 11 provides detailed installation instructions for Debug Tool.
- 7.0, “Service Instructions” on page 26 provides detailed servicing instructions for Debug Tool.
- Appendix A, “Create Product Parameter File (PPF) Override” on page 42 provides detailed information on overriding the Product Parameter File (PPF).

2.0 Program Materials

An IBM program is identified by a program number. The program number for IBM® Debug Tool for z/VM™ is 5654-A23.

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

The following sections identify:

- basic and optional program materials available with this program
- publications useful during installation.

2.1 Basic Machine-Readable Material

The distribution medium for this program is 3480 tape cartridge. The tape cartridge contains all the programs and data needed for installation. See section 6.0, “Installation Instructions” on page 11 for more information about how to install the program. Figure 1 describes the tape or cartridge. Figure 2 describes the file content of the program tape or cartridge.

Figure 1. Basic Material: Program Tape

Feature Number	Medium	Physical Volume	Tape Content	External Tape Label
5802	3480 cartridge	1	Debug Tool	Debug Tool VM V4.1
5812	3480 cartridge	1	Debug Tool - Japanese	Debug Tool VM V4.1

Note: IBM Debug Tool for z/VM is available through the z/VM SDO on 3480 or 3590. You can also receive Debug Tool electronically if you order it through the z/VM SDO using IBM ShopzSeries. For more information about IBM ShopzSeries go to

www.ibm.com/software/ShopzSeries

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

Tape File	Content
1	Tape Header
2	Tape Header
3	Product Header
4	Product Memo

Figure 2 (Page 2 of 2). Program Tape: File Content

Tape File	Content
5	Service Apply Lists (If applicable)
6	PTFPARTs
7	Debug Tool Service
8	Debug Tool Service
9	Debug Tool Base Code
10	Debug Tool Executable Code
11	Debug Tool NLS Base Code
12	Debug Tool NLS Executable Code

2.2 Optional Machine-Readable Material

There are no optional machine-readable materials for Debug Tool.

2.3 Program Publications

The following sections identify the basic and optional publications for Debug Tool.

2.3.1 Basic Program Publications

One copy of the following publication is included when you order the basic materials for Debug Tool.

Figure 3. Basic Material: Unlicensed Publications

Publication Title	Form Number
Licensed Program Specifications for Debug Tool	GC18-9387
Program Directory for IBM Debug Tool for z/VM	GI10-8669

2.3.2 Base Program Publications

Figure 4 identifies the base program publication associated with Debug Tool.

Figure 4. Program Material: Unlicensed Publications

Publication Title	Form Number
Debug Tool for z/VM: User's Guide	SC18-9388

2.3.3 Softcopy Publications

The Debug Tool publications are available through the IBM Publication Center web site at:

www.ibm.com/shop/publications/order

The Publications Center is a world wide central repository for IBM product publications and marketing material.

They are online in Adobe PDF format, which can currently be downloaded free of charge. They also can be ordered separately, for a fee, using the specific publication number through the IBM Publication Center at:

2.4 Program Source Materials

No program source materials or viewable program listings are provided with Debug Tool.

2.5 Publications Useful During Installation

The publications listed in Figure 5 or Figure 6, depending on your VM release, may be useful during the installation of Debug Tool.

Figure 5. Publications Useful During Installation / Service on z/VM Version 4

Publication Title	Form Number
z/VM: VMSES/E Introduction and Reference	GC24-5994
z/VM: Service Guide	GC24-5993
z/VM: Saved Segments Planning and Administration	SC24-6056
z/VM: CP Planning and Administration	SC24-6043
z/VM: CMS Command and Utility Reference	SC24-6010
z/VM: CMS File Pool Planning, Administration, and Operation	SC24-6058
z/VM: System Messages and Codes - Other Components	GC24-6032
z/VM: System Messages and Codes - CMS	GC24-6031
z/VM: System Messages and Codes - CP	GC24-6030
z/VM: Guide for Automated Installation and Service	GC24-6064

Figure 6 (Page 1 of 2). Publications Useful During Installation / Service on z/VM Version 5.1.0

Publication Title	Form Number
z/VM: VMSES/E Introduction and Reference	GC24-6130

Figure 6 (Page 2 of 2). Publications Useful During Installation / Service on z/VM Version 5.1.0

Publication Title	Form Number
z/VM: Service Guide	GC24-6117
z/VM: Saved Segments Planning and Administration	SC24-6116
z/VM: CP Planning and Administration	SC24-6083
z/VM: CMS Commands and Utilities Reference	SC24-6073
z/VM: CMS File Pool Planning, Administration, and Operation	SC24-6074
z/VM: System Messages and Codes - AVS, Dump Viewing Facility, GCS, TSAF, and VMSES/E	GC24-6120
z/VM: System Messages and Codes - CMS and REXX/VM	GC24-6118
z/VM: System Messages and Codes - CP	GC24-6119

3.0 Program Support

This section describes the IBM support available for Debug Tool.

3.1 Preventive Service Planning

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

Figure 7. PSP Upgrade and Subset ID

	Retain		
COMPID	**Release**	**Upgrade**	**Subset**
5654A2300	410	DEBUG410	VM/410

3.2 Statement of Support Procedures

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

Figure 8 identifies the component ID (COMPID), Retain Release and Field Engineering Service Number (FESN) for Debug Tool.

Figure 8. Component IDs

	Retain		
COMPID	**Release**	**Component Name**	**FESN**
5654A2300	410	Debug Tool	0400003
5654A2300	411	Debug Tool - Japanese	0400003

4.0 Program and Service Level Information

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

4.1 Program Level Information

No APARs have been incorporated into Debug Tool. IBM Debug Tool for z/VM is based off of the IBM Debug Tool for z/OS®, V4R1.

4.2 Service Level Information

Check the DEBUG410 PSP bucket for any additional PTFs that should be installed or any additional install information.

4.3 Cumulative Service Tape

Cumulative service for Debug Tool Release 1.0 is available through a monthly corrective service tape, Expanded Service Option, ESO.

5.0 Installation Requirements and Considerations

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

5.1 Hardware Requirements

There are no special hardware requirements for Debug Tool.

5.2 Program Considerations

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

5.2.1 Operating System Requirements

Debug Tool supports the following VM operating systems:

- z/VM™ Version 4 Release 4
- z/VM™ Version 5 Release 1

5.2.2 Other Program Product Requirements

Before you can verify Debug Tool successfully, one of the following must be installed, linked and accessed:

- Language Environment for VM 4.4.0 (that is pre-installed on z/VM V4R4.0 and z/VM V5) with the following APARs applied:
  - APAR PQ92283 (for Cobol Run-time Library)
  - APAR PQ92284 (for PL/I Run-time Library)

and depending on the product being verified, at least one of the following (at level specified or higher):

- IBM COBOL for OS/390 & VM V2R1 (5648-A25)
- PL/I for MVS & VM R1.1 (5688-235)
- C/C++ for z/VM V1R1 (5654-A22)

5.2.3 Program Installation and Service Considerations

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

- VMSES/E is required to install and service this product.
- If multiple users install and maintain licensed products on your system, there may be a problem getting the necessary access to MAINT's 51D disk. If you find that there is contention for write access to the 51D disk, you can eliminate it by converting the Software Inventory from minidisk to Shared File System (SFS). See the *VMSES/E Introduction and Reference* manual, section "Changing the Software Inventory to an SFS Directory", for information on how to make this change.
- Customers will no longer install and service Debug Tool strictly using the MAINT user ID, but will use a new user ID, 5654A23A. This is the IBM suggested user ID name. You are free to change this to any user ID name you wish; however, a PPF override must be created.

  Note: It may be easier to make the above PPF override change during the installation procedure 6.2, “Plan Your Installation For Debug Tool” step 6 on page 14, rather than after you have installed this product.

5.3 DASD Storage and User ID Requirements

Figure 9 lists the user IDs, minidisks and default SFS directory names that are used to install and service Debug Tool.

Important Installation Notes:

- User ID(s) and minidisks or SFS directories will be defined in 6.2, “Plan Your Installation For Debug Tool” on page 12 and are listed here so that you can get an idea of the resources that you will need prior to allocating them.
- 5654A23A is a default user ID and can be changed. If you choose to change the name of the installation user ID you need to create a Product Parameter Override (PPF) to reflect this change. This can be done in 6.2, “Plan Your Installation For Debug Tool” step 6 on page 14.
- If you choose to install Debug Tool on a common user ID the default minidisk addresses for Debug Tool may already be defined. If any of the default minidisks required by Debug Tool are already in use you will have to create an override to change the default minidisks for Debug Tool so they are unique.

Figure 9. DASD Storage Requirements for Target Minidisks

Minidisk owner (user ID)	Default Address	Storage in Cylinders		FB-512 Blocks	SFS 4K Blocks	Usage
		DASD	CYLS			Default SFS Directory Name
5654A23A	2B2	3390 3380 9345	30 36 36	43200	5400	Contains all the base code shipped with Debug Tool **VMSYS:5654A23A.DEBUG.OBJECT**
5654A23A	2C2	3390 3380 9345	2 3 3	3600	450	Contains customization files. This disk may also be used for local modifications. **VMSYS:5654A23A.DEBUG.LOCAL**
5654A23A	2D2	3390 3380 9345	15 18 18	21600	2700	Contains serviced files **VMSYS:5654A23A.DEBUG.DELTA**
5654A23A	2A6	3390 3380 9345	2 3 3	3600	450	Contains AUX files and software inventory tables that represent the test service level of Debug Tool **VMSYS:5654A23A.DEBUG.APPLYALT**
5654A23A	2A2	3390 3380 9345	2 3 3	3600	450	Contains AUX files and software inventory tables that represent the service level of Debug Tool that is currently in production. **VMSYS:5654A23A.DEBUG.APPLYPROD**
5654A23A	29E	3390 3380 9345	20 24 24	28800	3600	Test build disk. This code will be copied to a production disk, (e.g. MAINT 19E) so the production disk will also require this amount of free space. **VMSYS:5654A23A.DEBUG.TBUILD**
5654A23A	191	3390 3380 9345	5 6 6	6000	900	5654A23A user ID's 191 minidisk **VMSYS:5654A23A.**

Note: Cylinder values defined in this table are based on a 4K block size. FB-512 block and SFS values are derived from the 3380 cylinder values in this table. The FBA blocks are listed as 1/2K but should be CMS formatted at 1K size. 13950 4K blocks are needed for SFS install.

6.0 Installation Instructions

This chapter describes the installation methods and the step-by-step procedures to install and activate Debug Tool.

The step-by-step procedures are in two-column format. The steps to be performed are in bold, large numbers. Commands for these steps are on the left-hand side of the page in bold print. Additional information for a command may exist to the right of the command. For more information about the two-column format see "Understanding Dialogs with the System" in the *z/VM: Guide for Automated Installation and Service*.

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

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

Note

The sample console output presented throughout these instructions was produced on a z/VM 5.1.0 system. If you're installing Debug Tool on a different VM system, the results obtained for some commands may differ from those depicted here.

6.1 VMSES/E Installation Process Overview

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

- Plan Your Installation

  Use the VMFINS command to load several VMSES/E files from the product tape and to obtain Debug Tool resource requirements.

- Allocate Resources

  The information obtained from the previous step is used to allocate the appropriate minidisks (or SFS directories) and user IDs needed to install and use Debug Tool.

- Install the Debug Tool Product

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

- Place Debug Tool Files into Production

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

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

6.2 Plan Your Installation For Debug Tool

The VMFINS command will be used to plan the installation. This section has 2 main steps that will:

- load the first tape file, containing installation files
- generate a 'PLANINFO' file listing
  - all user ID and mdisks/SFS directory requirements
  - required products

To obtain planning information for your environment:

1 Log on as Debug Tool installation planner.

This user ID can be any ID that has read access to MAINT's 5E5 minidisk and write access to the MAINT 51D minidisk.

2 Mount the Debug Tool installation tape and attach it to the user ID at virtual address 181. The VMFINS EXEC requires the tape drive to be at virtual address 181. If you have an electronically delivered product envelope (SERVLINK file) then make sure it is available on the A-disk or any disk or SFS directory accessed as C.

3 Establish read access to the VMSES/E code.

link MAINT 5e5 5e5 rr **access 5e5 b**	The 5E5 disk contains the VMSES/E code.

4 Establish write access to the Software Inventory disk.

link MAINT 51d 51d mr **access 51d d**	The MAINT 51D disk is where the VMSES/E system-level Software Inventory and other dependent files reside.

Note: If another user already has the MAINT 51D minidisk linked in write mode (R/W), you will only obtain read access (R/O) to this minidisk. If this occurs, you will need to have that user re-link the 51D in read-only mode (RR), and then re-issue the above LINK and ACCESS commands. Do not continue with these procedures until a R/W link is established to the 51D minidisk.

5 Load the Debug Tool product control files to the 51D minidisk.

a If installing from **tape**

vmfins install info (nomemo

The NOMEMO option will load the memos from the tape but will not issue a prompt to send them to the system printer. Specify the MEMO option if you want to be prompted for printing the memo.

This command will perform the following:

- load Memo-to-Users
- load various product control files, including the Product Parameter File (PPF) and the PRODPART files
- create VMFINS PRODLIST on your A-disk. The VMFINS PRODLIST contains a list of products on the installation tape.

b If installing from product **envelope** file

vmfins install info (nomemo env *envfilename*

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

The NOMEMO option will load the memos from the tape but will not issue a prompt to send them to the system printer. Specify the MEMO option if you want to be prompted for printing the memo.

This command will perform the following:

- load Memo-to-Users
- load various product control files, including the Product Parameter File (PPF) and the PRODPART files
- create VMFINS PRODLIST on your A-disk. The VMFINS PRODLIST contains a list of products on the installation tape.

```
VMFINS2767I Reading VMFINS DEFAULTS B for additional options
VMFINS2760I VMFINS processing started
VMFINS1909I VMFINS PRODLIST created on your A-disk
VMFINS2760I VMFINS processing completed successfully
Ready;
```

6 Obtain resource planning information for Debug Tool.

The following table (Figure 10) contains all of the VMSES/E component names for Debug Tool. You are to **choose ONE** of the component names from this table to use in the VMSES/E commands throughout this install and when you have service for Debug Tool.

Figure 10. Available Debug Tool Install/Service Component Names

Installation/Service Component Names	**Description**
DEBUG	Debug Tool Base Product
DEBUGSFS	Debug Tool Base Product (SFS)
DEBUGKANJI	Debug Tool Base Product + Kanji feature
DEBUGKSFS	Debug Tool Base Product + Kanji (SFS)

Notes:

a. The product will **not** be loaded by the VMFINS command at this time.

b. If you change the PPF name, a default user ID, or other parameters via a PPF override, you will need to use your changed values instead of those indicated (when appropriate), throughout the rest of the installation instructions, as well as the instructions for servicing Debug Tool. For example, you will need to specify your PPF override file name instead of 5654A23A for certain VMSES/E commands.

c. If you're not familiar with creating PPF overrides using VMFINS, you should review the "Using the Make Override Panel" section in Chapter 3 of the *VMSES/E Introduction and Reference* before you continue. You can also find information about changing the VMSYS file pool name in the same chapter.

a If installing from **tape**

vmfins install ppf 5654A23A *compname* **(plan nomemo**

compname should be one of the component names listed in Figure 10. The compname that you use at this time should be used throughout the install and service process for the *compname* in the VMSES/E commands.

The PLAN option indicates that VMFINS will perform requisite checking, plan system resources, and provide an opportunity to override the defaults in the product parameter file.

You can override any of the following:

- the name of the product parameter file
- the default user IDs
- minidisk/directory definitions

b If installing from product **envelope** file

vmfins install ppf 5654A23A *compname* **(plan nomemo env** *envfilename*

compname should be one of the component names listed in Figure 10 on page 14. The compname that you use at this time should be used throughout the install and service process for the *compname* in the VMSES/E commands.

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

The PLAN option indicates that VMFINS will perform requisite checking, plan system resources, and provide an opportunity to override the defaults in the product parameter file.

You can override any of the following:

- the name of the product parameter file
- the default user IDs
- minidisk/directory definitions

```
VMFINS2767I Reading VMFINS DEFAULTS B for additional options
VMFINS2760I VMFINS processing started
VMFINS2601R Do you want to create an override for :PPF 5654A23A
            DEBUG :PRODID 5654A23A%DEBUG?
            Enter 0 (No), 1 (Yes) or 2 (Exit)
0
VMFINS2603I Processing product :PPF 5654A23A DEBUG
            :PRODID 5654A23A%DEBUG
VMFREQ2805I Product :PPF 5654A23A DEBUG :PRODID
            5654A23A%DEBUG has passed requisite checking
VMFINT2603I Planning for the installation of product :PPF
            5654A23A DEBUG :PRODID 5654A23A%DEBUG
VMFRMT2760I VMFRMT processing started
VMFRMT2760I VMFRMT processing completed successfully
VMFINS2760I VMFINS processing completed successfully
```

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

vmfview install

6.3 Allocate Resources for Installing Debug Tool

Use the planning information in the 5654A23A PLANINFO file, created in the **PLAN** step, to:

- Create the 5654A23A user directory for minidisk install

  OR

- Create the 5654A23A user directory for SFS install

6.3.1 Installing Debug Tool on Minidisk

1 Obtain the user directory from the 5654A23A PLANINFO file.

Note: The user directory entry is located in the resource section of the PLANINFO file, at the bottom; these entries will contain all of the links and privilege classes necessary for the 5654A23A user ID. Use the directory entry found in PLANINFO as a model as input to your system directory.

2 Add the MDISK statements to the directory entry for 5654A23A. Use Figure 9 on page 9 to obtain the minidisk requirements.

3. Add the 5654A23A directory entry to the system directory. Change the password for 5654A23A from xxxxx to a valid password, in accordance with your security guidelines.

4. Place the new directories on-line using VM/Directory Maintenance (DIRMAINT) or an equivalent CP directory maintenance method.

> **Note**
>
> All minidisks for the 5654A23A user ID must be CMS formatted before installing Debug Tool.

6.3.2 Installing Debug Tool in SFS Directories

1. Obtain the user directory from the 5654A23A PLANINFO file.

   Note: The user directory entry is located in the resource section of the PLANINFO file, at the bottom; these entries will contain all of the links and privilege classes necessary for the 5654A23A user ID. Use the directory entry found in PLANINFO as a model as input to your system directory.

2. Add the 5654A23A directory entry to the system directory. Change the password for 5654A23A from xxxxx to a valid password, in accordance with your security guidelines.

3. Place the new directories on-line using VM/Directory Maintenance (DIRMAINT) or an equivalent CP directory maintenance method.

4. An SFS installation will also require the following steps:

   a. Determine the number of 4K blocks that are required for SFS directories by adding up the 4K blocks required for each SFS directory you plan to use.

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

      This information will be used when enrolling the user ID, 5654A23A, in the VMSYS filepool.

   b. Enroll user 5654A23A in the VMSYS filepool using the ENROLL USER command:

      ```
      ENROLL USER 5654A23A VMSYS: (BLOCKS blocks
      ```

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

Note: This must be done from a user ID that is an administrator for VMSYS: filepool.

c Determine if there are enough blocks available in the filepool to install Debug Tool. This information can be obtained from the QUERY FILEPOOL STORGRP command. If the number of blocks free is smaller than the total 4K blocks needed to install Debug Tool you will need to add space to the filepool. See the *CMS File Pool Planning, Administration, and Operation* manual for information on adding space to a filepool.

d Create the necessary subdirectories listed in the 5654A23A PLANINFO file using the CREATE DIRECTORY command. The list of default Debug Tool SFS directories is provided in Figure 9 on page 9.

```
set filepool vmsys:
create directory vmsys:5654A23A.DEBUG
create directory vmsys:5654A23A.DEBUG.applyalt
create directory vmsys:5654A23A.DEBUG.applyprod
create directory vmsys:5654A23A.DEBUG.delta
create directory vmsys:5654A23A.DEBUG.object
create directory vmsys:5654A23A.DEBUG.local
create directory vmsys:5654A23A.DEBUG.tbuild
```

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

e If you intend to use an SFS directory as the work space for the 5654A23A user ID, include the following IPL control statement in the 5654A23A directory entry:

```
IPL CMS PARM FILEPOOL VMSYS
```

This will cause CMS to automatically access the 5654A23A's top directory as file mode A.

6.4 Install Debug Tool

The *ppfname* used throughout these installation instructions is **5654A23A**, which assumes you are using the PPF supplied by IBM for Debug Tool. If you have your own PPF override file for Debug Tool, you should use your file's *ppfname* instead of **5654A23A**. The *ppfname* you use should be used **throughout** the rest of this procedure.

1 Logon to the installation user ID **5654A23A**.

2 Create a PROFILE EXEC that will contain the ACCESS commands for MAINT 5E5 and 51D minidisks.

```
xedit profile exec a
===> input /**/
===> input 'access 5e5 b'
===> input 'access 51d d'
===> file
```

If either 5E5 or 51D is in a shared file system (SFS) then substitute your SFS directory name in the access command.

3 Run the profile to access MAINT's minidisks.

```
profile
```

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

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

```
link MAINT 51d 51d mr
access 51d d
```

5 Have the Debug Tool installation tape mounted and attached to 5654A23A at virtual address 181. The VMFINS EXEC requires the tape drive to be at virtual address 181. If you have an electronically delivered product envelope (SERVLINK file) then make sure it is available on the A-disk or on a disk accessed as C.

6 Install Debug Tool.

Notes:

a. If you've already created a PPF override file, you should specify your override file name, in place of the default PPF name (5654A23A), after the **PPF** keyword for the following VMFINS command.

b. You may be prompted for additional information during VMFINS INSTALL processing depending on your installation environment. If you're unsure how to respond to a prompt, refer to the "Installing Products with VMFINS" and "Install Scenarios" chapters in the *VMSES/E Introduction and Reference* to decide how to proceed.

a If installing from **tape**

vmfins install ppf 5654A23A *compname* **(nomemo nolink**

compname should be one of the component names listed in Figure 10 on page 14. The compname that you use at this time should be used throughout the install and service process for the *compname* in the VMSES/E commands.

The NOLINK option indicates that you don't want VMFINS to link to the appropriate minidisks, only access them if not accessed.

b If installing from product **envelope** file

vmfins install ppf 5654A23A *compname* **(nomemo nolink env** *envfilename*

compname should be one of the component names listed in Figure 10 on page 14. The compname that you use at this time should be used throughout the install and service process for the *compname* in the VMSES/E commands.

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

The NOLINK option indicates that you don't want VMFINS to link to the appropriate minidisks, only access them if not accessed.

```
VMFINS2767I Reading VMFINS DEFAULTS B for additional options
VMFINS2760I VMFINS processing started
VMFINS2601R Do you want to create an override for :PPF 5654A23A DEBUG
            :PRODID 5654A23A%DEBUG?
            Enter 0 (No), 1 (Yes) or 2 (Exit)
0
VMFINS2603I Processing product :PPF 5654A23A DEBUG :PRODID
            5654A23A%DEBUG
VMFREQ2805I Product :PPF 5654A23A DEBUG :PRODID 5654A23A%DEBUG
            has passed requisite checking
VMFINT2603I Installing product :PPF 5654A23A DEBUG :PRODID
            5654A23A%DEBUG
VMFSET2760I VMFSETUP processing started
VMFUTL2205I Minidisk|Directory Assignments:
            String    Mode  Stat  Vdev  Label/Directory
VMFUTL2205I LOCAL     E      R/W  2C2   DBG2C2
VMFUTL2205I APPLY     F      R/W  2A6   DBG2A6
VMFUTL2205I           G      R/W  2A2   DBG2A2
VMFUTL2205I DELTA     H      R/W  2D2   DBG2D2
VMFUTL2205I BUILD0    I      R/W  29E   DBG29E
VMFUTL2205I BASE1     J      R/W  2B2   DBG2B2
VMFUTL2205I --------  A      R/W  191   DBG191
VMFUTL2205I --------  B      R/O  5E5   SES5E5
VMFUTL2205I --------  D      R/W  51D   SES51D
VMFUTL2205I --------  S      R/O  190   HCP490
VMFUTL2205I --------  Y/S    R/O  19E   ZVM19E
VMFSET2760I VMFSETUP processing completed successfully
VMFREC2760I VMFREC processing started
VMFREC1852I Volume 1 of 1 of INS ENVELOPE 0400
VMFREC1851I (1 of 6) VMFRCAXL processing AXLIST
VMFRCX2159I Loading 0 part(s) to DELTA 2D2 (H)
VMFREC1851I (2 of 6) VMFRCPTF processing PARTLST
VMFRCP2159I Loading 0 part(s) to DELTA 2D2 (H)
VMFREC1851I (3 of 6) VMFRCCOM processing DELTA
VMFRCC2159I Loading 0 part(s) to DELTA 2D2 (H)
VMFREC1851I (4 of 6) VMFRCALL processing APPLY
VMFRCA2159I Loading part(s) to APPLY 2A6 (F)
VMFRCA2159I Loaded 1 part(s) to APPLY 2A6 (F)
VMFREC1851I (5 of 6) VMFRCALL processing BASE
VMFRCA2159I Loading part(s) to BASE1 2B2 (J)
VMFRCA2159I Loaded 611 part(s) to BASE1 2B2 (J)
VMFREC1851I (6 of 6) VMFRCALL processing BUILD
VMFRCA2159I Loading part(s) to BUILD0 29E (I)
VMFRCA2159I Loaded 280 part(s) to BUILD0 29E (I)
VMFREC2760I VMFREC processing completed successfully
VMFINT2603I Product installed
VMFINS2760I VMFINS processing completed successfully
```

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

vmfview install

6.4.1 Update Build Status Table for Debug Tool

1 Update the VM SYSBLDS software inventory file for Debug Tool.

vmfins build ppf 5654A23A *compname* **(serviced nolink**

compname should be the component name you chose to install with from figure Figure 10 on page 14.

The SERVICED option will build any parts that were not built on the installation tape (if any) and update the Software Inventory build status table showing that the product 5654A23A has been built.

At the end of the VMFINS BUILD, VMSES/E will automatically run the Debug Tool Verification program. In order for this program to run successfully, you must have *Language Environment® for VM* installed, linked and accessed. With z/VM 4.4.0 and z/VM 5.1.0, Language Environment® for VM is automatically installed to the system Y-disk (MAINT 19E). If you have moved Language Environment® for VM from the system Y-disk, you must link and access the disk containing Language Environment® for VM. You must also have *at least one* of the following products (at level specified or higher) installed, linked and accessed:

1. IBM COBOL for OS/390 & VM V2R1M0 (5648-A25)
2. PL/I for MVS & VM R1.1 (5688-235)
3. IBM C/C++ for z/VM (5654-A22)

If the Debug Tool Verification program does not run successfully, make sure the products listed above are installed, linked, and accessed. Then type V5654A23 to invoke the Verification program.

2 Review the install message log ($VMFINS $MSGLOG). If necessary, correct any problems before continuing. For information about handling specific error

messages, see the appropriate *z/VM: System Messages and Codes,* or use on-line HELP.

vmfview install

```
vmfins build ppf 5654A23A debug (serviced nolink
VMFINS2767I Reading VMFINS DEFAULTS B for additional options
VMFINS2760I VMFINS processing started
VMFINS2603I Processing product :PPF 5654A23A DEBUG :PRODID 5654A23A%DEBUG
VMFREQ2805I Product :PPF 5654A23A DEBUG :PRODID 5654A23A%DEBUG has passed
            requisite checking
VMFINB2603I Building product :PPF 5654A23A DEBUG :PRODID 5654A23A%DEBUG
VMFSET2760I VMFSETUP processing started for 5654A23A DEBUG
VMFUTL2205I Minidisk|Directory Assignments:
            String    Mode  Stat  Vdev  Label/Directory
VMFUTL2205I LOCAL     E       R/W  2C2   DBG2C2
VMFUTL2205I APPLY     F       R/W  2A6   DBG2A6
VMFUTL2205I           G       R/W  2A2   DBG2A2
VMFUTL2205I DELTA     H       R/W  2D2   DBG2D2
VMFUTL2205I BUILD0    I       R/W  29E   DBG29E
VMFUTL2205I BASE1     J       R/W  2B2   DBG2B2
VMFUTL2205I --------  A       R/W  191   DBG191
VMFUTL2205I --------  B       R/O  5E5   SES5E5
VMFUTL2205I --------  C       R/O  39E   SES39E
VMFUTL2205I --------  D       R/W  51D   TMP51D
VMFUTL2205I --------  S       R/O  190   HCP490
VMFUTL2205I --------  Y/S     R/O  19E   ZVM19E
VMFSET2760I VMFSETUP processing completed successfully
VMFBLD2760I VMFBLD processing started
VMFBLD1851I Reading build lists
VMFBLD2182I Identifying new build requirements
VMFBLD2182I No new build requirements identified
VMFBLD2179I There are no build requirements matching your request at this time.
            No objects will be built
VMFBLD2180I There are 0 build requirements remaining
VMFBLD2760I VMFBLD processing completed successfully
VMFINB2603I Product built
```

Figure 11 (Part 1 of 2). Sample Install/Verification console

```
VMFINB2173I Executing verification exec V5654A23

                      IBM DEBUG TOOL

    Do you want to verify the "COBOL", "C" , or "PLI" product ??

    A response of "ALL" will automatically verify all of them.

    Enter "END or QUIT" to Exit EXEC

COBOL

Ready; T=26.20/26.96 13:54:48
```

Figure 11 (Part 2 of 2). Sample Install/Verification console

The Verification Exec will automatically step thru a sample program within the DEBUG environment. Successful completion of the program will be noted by the message "VERIFICATION OF *prodid* SUCCESSFUL".

6.5 Place the Debug Tool Into Production

6.5.1 Copy the Debug Tool Files Into Production

1 Logon to MAINT if you plan to put Debug Tool general use code on the 'Y' disk (product code or MAINT's 19E disk). Or logon to the owner of the disk that will contain the 'production' level of the Debug Tool code.

a If installing minidisks

link 5654A23A 29e 29e rr
access 29e e
access 19e f
vmfcopy * * e = = f2 (prodid 5654A23A%DEBUG olddate replace

The VMFCOPY command will update the VMSES PARTCAT file on the MAINT 19E disk.

b If installing using the Shared File System

access 5654A23A.DEBUG.TBUILD e
access 19e f
vmfcopy * * e = = f2 (prodid 5654A23A%DEBUG olddate replace

The VMFCOPY command will update the VMSES PARTCAT file on the MAINT 19E disk.

2 Rebuild the CMS saved system, to return the Y-disk (product code or MAINT's 19E disk) to 'shared' status. Make sure you are logged on to the MAINT user ID.

a Prepare to build the CMS saved system

acc 193 m **sampnss**	Define a skeleton CMS saved system.

b Build the CMS saved system

ipl 190 clear parm savesys cms *z/VM V5.1.0 mm/dd/yy hh:mm* **ENTER**	Build the CMS saved system. Press ENTER to complet the IPL.

6.6 Post-Installation Considerations

Upon successful installation, the Debug Tool can be installed into segments. If you choose to create the Debug Tool segments then they will be used instead of the modules on the test or production build disks.

See Chapter 8.0, “Define and Build the Debug Tool Saved Segments Using VMSES/E” on page 35 for a full description on how to customize and install in saved segments.

Debug Tool is now installed and built on your system.

7.0 Service Instructions

This section of the Program Directory contains the procedure to install CORrective service to Debug Tool. VMSES/E is used to install service for Debug Tool.

To become more familiar with service using VMSES/E, you should read the introductory chapters in the *VMSES/E Introduction and Reference*. This manual also contains the command syntax for the VMSES/E commands listed in the procedure.

Note: Each step of the servicing instructions must be followed. Do not skip any step unless directed to do so. All instructions showing accessing of disks assume the use of default minidisk addresses. If different minidisk addresses are used, or a shared file system is used, change the instructions appropriately.

7.1 VMSES/E Service Process Overview

The following is a brief description of the main steps in servicing Debug Tool using VMSES/E.

- Setup Environment

  Access the software inventory disk. Use VMFSETUP command to establish the correct minidisk access order.

- Merge Service

  Use the VMFMRDSK command to clear the alternate apply disk before receiving new service. This allows you to remove the new service if a serious problem is found.

- Receive Service

  The VMFREC command receives service from the delivery media and places it on the Delta disk.

- Apply Service

  The VMFAPPLY command updates the version vector table (VVT), which identifies the service level of all the serviced parts. In addition, AUX files are generated from the VVT for parts that require them.

- Reapply Local Service (if applicable)

  All local service (mods) must be entered into the software inventory to allow VMSES/E to track the changes and build them into the system. Refer to Chapter 7 in the *z/VM: Service Guide* for this procedure.

- Build New Levels

  The build task generates the serviced level of an object and places the new object on a test BUILD disk.

- Place the New Service into Production

Once the service is satisfactorily tested it should be put into production by copying the new service to the production disk and, re-saving the NSS (Named Saved System) or DCSS (Discontiguous Saved Segments).

Important NOTE

Servicing of specific Debug Tool modules requires that the "BUILD" disk for the *Language Environment® for VM* be accessed during application of Debug Tool service. By default, this disk is the system Y-disk (MAINT 19E). If the Language Environment® for VM code does not reside on the system Y-disk, you must link and access the disk which contains the Language Environment® for VM code. Failure to do this will result in the failure of the Debug Tool modules being rebuilt.

7.2 Servicing Debug Tool

Electronic Service (envelope file)

If you have received the service electronically or on CD-ROM, follow the appropriate instructions to retrieve and decompress the envelope file to your A-disk. The decompression is currently done by using the DETERSE MODULE. The file names of the decompressed files will be of the format:

- VLST*num* for the documentation envelope
- VPTF*num* for the service envelope

The file type for both of these files must be SERVLINK. You will need to enter the file name on the VMFREC commands that follow.

The following table (Figure 12) contains all of the VMSES/E component names for Debug Tool. You are to choose ONE of the component names from this table to use in the VMSES/E commands throughout this install and when you have service for Debug Tool.

Figure 12. Available Debug Tool Install/Service Component Names

Installation/Service Component Names	**Description**
DEBUG	Debug Tool Base Product
DEBUGSFS	Debug Tool Base Product (SFS)
DEBUGKANJI	Debug Tool Base Product + Kanji feature
DEBUGKSFS	Debug Tool Base Product + Kanji (SFS)

The *ppfname* used throughout these servicing instructions is **5654A23A**, which assumes you are using the PPF supplied by IBM for Debug Tool. If you have your own PPF override file for Debug Tool, you should use your file's *ppfname* instead of **5654A23A**. The *ppfname* you use should be used **throughout** the rest of this procedure, unless otherwise stated differently.

7.2.1 Prepare to Receive Service

1 Logon to Debug Tool service user ID **5654A23A**

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

Note: If the MAINT 51D minidisk was accessed R/O, because someone else had it R/W, you will need to have the user that has it accessed R/W link it R/O. You then can issue the following commands to obtain R/W access to it.

link MAINT 51d 51d mr
access 51d d

The 51D minidisk is where the VMSES/E Software Inventory files and other product dependent files reside.

3 Have the Debug Tool CORrective service tape mounted and attached to ***5654A23A***. If you have a CORrective service envelope (SERVLINK) file make sure that is it available on the A-disk or any minidisk or SFS directory accessed as C.

4 Receive the documentation.

a If receiving the service from **tape**

vmfrec info

The INFO option loads the documentation (including the product service memo) to the 191 disk and displays a list of products on the tape.

b If receiving the service from an **envelope** file

vmfrec info (env vlst*num*

The INFO option loads the documentation (including the product service memo) to the 191 disk and displays a list of products in the envelope file.

5 Check the receive message log ($VMFREC $MSGLOG) for warning and error messages.

vmfview receive

Also make note of which products and components have service on the tape. To do this, use the PF5 key to show all status messages which identify the products on the tape.

6 Read the product memo (5654A23A MEMO) before continuing.

7 Set up the correct product access order.

vmfsetup 5654A23A *compname*

compname should be one of the component names listed in Figure 12 on page 27. The compname that you use at this time should be used throughout the install and service process for the *compname* in the VMSES/E commands.

8 Merge previously applied service to ensure that you have a clean alternate APPLY disk for new service.

vmfmrdsk 5654A23A *compname* **apply**

compname should be the component name you are using from figure Figure 12 on page 27.

This command clears the alternate APPLY disk.

9 Review the merge message log ($VMFMRD $MSGLOG). If necessary, correct any problems before continuing. For information about handling specific error messages, see the appropriate *z/VM: System Messages and Codes*, or use on-line HELP.

vmfview mrd

7.2.2 Receive the Service

Note: If you are installing multiple service tapes, you can receive all of the service for this prodid before applying and building it.

For **each** service tape or electronic envelope you want to receive, do the following:

1 Receive the service.

a If receiving the service from **tape**

vmfrec ppf 5654A23A *compname*

compname should be the component name you are using from figure Figure 12 on page 27.

This command receives service from your service tape. All new service is loaded to the DELTA disk.

b If receiving the service from an **envelope** file

vmfrec ppf 5654A23A *compname* **(env vptf***num*

compname should be the component name you are using from figure Figure 12 on page 27.

This command receives service from your service envelope. All new service is loaded to the DELTA disk.

2 Review the receive message log ($VMFREC $MSGLOG). If necessary, correct any problems before continuing. For information about handling specific error messages, see the appropriate *z/VM: System Messages and Codes*, or use on-line HELP.

vmfview receive

7.2.3 Apply the Service

1 Apply the new service.

vmfapply ppf 5654A23A *compname*

compname should be the component name you are using from figure Figure 12 on page 27.

This command applies the service that you just received. The version vector table (VVT) is updated with all serviced parts and all necessary AUX files are generated on the alternate APPLY disk.

Note: If you receive a return code of 4 this may indicate that you have local modifications that need to be reworked so make sure you review the VMFAPPLY message log as documented in the next step.

2 Review the apply message log ($VMFAPP $MSGLOG). If necessary, correct any problems before continuing on. For information about handling specific error messages, see the appropriate *z/VM: System Messages and Codes*, or use on-line HELP.

vmfview apply

Note

If you get the message VMFAPP2120W then re-apply any local modifications before building the new Debug Tool. Refer to chapter 7 in the *z/VM: Service Guide*. Follow the steps that are applicable to your local modification.

The following substitutions need to be made:

- **zvm** should be **5654A23A**
- *compname* should be **DEBUG** or **DEBUGSFS** (minidisk or SFS)
- *appid* should be **5654A23A**
- *fm-local* should be the fm of 2C2
- **outmode localmod** should be **outmode local**

If you have changed any of the installation parameters through a PPF override, you need to substitute your changed values where applicable.

Keep in mind that when you get to the "Return to the Appropriate Section to Build Remaining Objects" or "Rebuild Remaining Objects" step in the VM *z/VM: Service Guide*, you should return back to this program directory at 7.2.4, “Update the Build Status Table” on page 31.

7.2.4 Update the Build Status Table

Important NOTE

Servicing of specific Debug Tool modules requires that the "BUILD" disk for the *Language Environment® for VM* be accessed during application of Debug Tool service. By default, this disk is the system Y-disk (MAINT 19E). If the Language Environment® for VM code does not reside on the system Y-disk, you must link and access the disk which contains the Language Environment® for VM code. Failure to do this will result in the failure of the Debug Tool modules being rebuilt.

1 Update the Build Status Table with serviced parts.

vmfbld ppf 5654A23A *compname* **(status**

compname should be the component name you are using from figure Figure 12 on page 27.

Note

If the $PPF files have been serviced, you will get the following prompt:

```
VMFBLD2185R The following source product parameter files have been
            serviced:
VMFBLD2185R 5654A23A $PPF
VMFBLD2185R When source product parameter files are serviced, all
            product parameter files built from them must be recompiled
            using VMFPPF before VMFBLD can be run.
VMFBLD2185R Enter zero (0) to have the serviced source product
            parameter files built to your A-disk and exit VMFBLD so
            you can recompile your product parameter files with VMFPPF.
VMFBLD2185R Enter one (1) to continue only if you have already
            recompiled your product parameter files with VMFPPF.
```

0	Enter a 0 and complete the following steps before you continue.

```
VMFBLD2188I Building 5654A23A $PPF
            on 191 (A) from level $PFnnnnn
```

vmfppf 5654A23A *	**Note:** If you've created your own PPF override then use your PPF name instead of 5654A23A.
copy 5654A23A $PPF a = = d (oldd replace **erase 5654A23A $PPF a**	**Note: Do not** use your own PPF name in place of 5654A23A for the COPY and ERASE commands.
vmfbld ppf 5654A23A *compname* **(status** **1**	Re-issue VMFBLD to complete updating the build status table. If you have your own PPF name then you should use it in the VMFBLD command. **compname** should be the component name you are using from figure Figure 12 on page 27. When you receive the prompt that was previously displayed, enter a 1 to continue.

2 Use VMFVIEW to review the build status messages, and see what objects need to be built.

vmfview build

7.2.5 Build Serviced Objects

1 Rebuild Debug Tool serviced parts.

vmfbld ppf 5654A23A *compname* **(serviced**

compname should be the component name you are using from figure Figure 12 on page 27.

If you received messages DMSLIO994W Restrictive RMODE encountered in CSECT, they can be ignored.

Note: If your software inventory disk (51D) is not owned by the MAINT user ID then make sure the VMSESE PROFILE reflects the correct owning user ID.

2 Review the build message log ($VMFBLD $MSGLOG). If necessary, correct any problems before continuing. For information about handling specific error messages, see the appropriate *z/VM: System Messages and Codes*, or use on-line HELP.

vmfview build

7.3 Place the New Debug Tool Service Into Production

7.3.1 Copy the New Debug Tool Serviced Files Into Production

1 Logon to MAINT if you plan to put Debug Tool general use code on the 'Y' disk (product code or MAINT's 19E disk). Or logon to the owner of the disk that will contain the 'production' level of the Debug Tool code.

a If installing minidisks

link 5654A23A 29e 29e rr
access 29e e
access 19e f
vmfcopy * * e = = f2 (prodid 5654A23A%DEBUG olddate replace

The VMFCOPY command will update the VMSES PARTCAT file on the MAINT 19E disk.

b If installing using the Shared File System

access 5654A23A.DEBUG.TBUILD e
access 19e f
vmfcopy * * e = = f2 (prodid 5654A23A%DEBUG olddate replace

The VMFCOPY command will update the VMSES PARTCAT file on the MAINT 19E disk.

2 Rebuild the CMS saved system, to return the Y-disk (product code or MAINT's 19E disk) to 'shared' status. Make sure you are logged on to the MAINT user ID.

a Prepare to build the CMS saved system

acc 193 m
sampnss

Define a skeleton CMS saved system.

b Build the CMS saved system

ipl 190 clear parm savesys cms
z/VM V5.1.0 mm/dd/yy hh:mm
ENTER

Build the CMS saved system.

Press ENTER to complet the IPL.

7.4 Post-Service Considerations

Upon successfully servicing the Debug Tool, you must rebuild the shared segments if you chose to create the Debug Tool segments at installation time.

Go to Chapter 8.0, “Define and Build the Debug Tool Saved Segments Using VMSES/E,” step 9 on page 40 for instructions on rebuilding the Debug Tool saved segments.

You have finished servicing Debug Tool.

8.0 Define and Build the Debug Tool Saved Segments Using VMSES/E

It is recommended that segments be built for Debug Tool. First the segments are defined to the system using the segment mapping tool VMFSGMAP. Once the segments are defined VMFBLD is used to build them.

For more information on using VMSES/E for saved segments, review the chapter, "Using VMSES/E to Define, Build, and Manage Saved Segments" in the *z/VM: Saved Segments Planning and Administration* manual.

Note: The defining and building of the Debug Tool saved segments should be performed from the installation user ID. If you move any segments that are currently defined on your system you must ensure that they are rebuilt from the user ID that maintains them.

1 Logon to the installation user ID **5654A23A**.

2 Establish write access to the VMSES/E and software inventory disks.

```
link MAINT 51d 51d mr
access 51d d
```

3 Add Debug Tool segment object definitions to the SEGBLIST EXC00000 build list.

vmfsgmap segbld esasegs segblist

This command displays a panel for making segment updates. See Figure 13 on page 36 for an example of the Segment Map panel that will be displayed.

```
                            VMFSGMAP - Segment Map                  More: +
                                                                 Lines 1 to nn of nn

Meg             000-MB          001-MB          002-MB          003-MB
St Name    Typ 0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
M CMS      SYS W-W-------------1.............2.............3.............
M GCS      SYS W---------------1.............2.............3.............

Meg             004-MB          005-MB          006-MB          007-MB
St Name    Typ 0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
  CMSPIPES DCS 4.............5.............6.............RRRR------------
M GCS      SYS RRRRRRNNNNNNNNNNNNNNNNNNNNNNNN6.............7.............
M HLASM    DCS 4.............5.............RRRRRRRRRRRRRRR7.............

Meg             008-MB          009-MB          00A-MB          00B-MB
St Name    Typ 0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
  DOSBAM   SPA 8.............9.............A.............====------------
  CMSBAM   MEM 8.............9.............A.............BRRR............
  CMSDOS   MEM 8.............9.............A.............R.............
  CMSVMLIB DCS RRRRRRRRRRRRRRR9.............A.............B.............
  DOSINST  DCS 8.............R---------------A.............B.............

Meg             00C-MB          00D-MB          00E-MB          00F-MB
St Name    Typ 0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
  HELPINST DCS RRRRRRRRRRRRRRRD.............E.............F.............
M CMS      SYS C.............D.............RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR>

================================= 16-MB Line ====================================

                010-MB          011-MB          012-MB          013-MB
 F1=Help     F2=Chk Obj   F3=Exit      F4=Chg Obj   F5=File       F6=Save
 F7=Bkwd     F8=Fwd       F9=Retrieve  F10=Add Obj  F11=Del Obj   F12=Cancel
====> _
```

Figure 13. Segment Map panel example.

4 Go to Add Segment Definition panel by pressing PF10.

F10

F10 takes you from the Segment Map panel to the Add Segment Definition panel. See Figure 14 on page 37 to see the Add Segment Definition panel that will be displayed.

```
                              Add Segment Definition
                                                          Lines 1 to nn of nn

 OBJNAME....:  ????????
 DEFPARMS...:
 SPACE......:
 TYPE.......:  SEG
 OBJDESC....:
 OBJINFO....:
 GT_16MB....:  NO
 DISKS......:
 SEGREQ.....:
 PRODID.....:  5654A23A DEBUG
 BLDPARMS...:  UNKNOWN




 F1=Help     F2=Get Obj   F3=Exit      F4=Add Line  F5=Map        F6=Chk MEM
 F7=Bkwd     F8=Fwd       F9=Retrieve  F10=Seginfo  F11=Adj MEM   F12=Cancel
====>
```

Figure 14. Add Segment Definition panel example.

5 Obtain the Debug Tool segment definitions from the PRODPART file by filling in the appropriate fields on the add segment definition panel.

PRODID.....: **5654A23A** *compname*

compname should be the component name you are using from figure Figure 10 on page 14 or Figure 12 on page 27.

F10

F10 will obtain the Debug Tool segment information from the 5654A23A PRODPART file. See Figure 15 on page 38 for the refreshed Add Segment definition panel that will be displayed.

```
                              Add Segment Definition                 More: +
                                                                  Lines 1 to nn of nn



 OBJNAME....:  SEQASEG
 DEFPARMS...:  2800-2EFF SR
 SPACE......:
 TYPE.......:  PSEG
 OBJDESC....:  SEQA SEGMENT ABOVE 16 MEG
 OBJINFO....:
 GT_16MB....:  YES
 DISKS......:
 SEGREQ.....:
 PRODID.....:  5654A23A DEBUG
 BLDPARMS...:  PPF(5654A23A DEBUG EVFWBLBS)


 OBJNAME....:  SEQBSEG
 DEFPARMS...:  0900-09FF SR
 SPACE......:
 TYPE.......:  PSEG
 OBJDESC....:  SEQA SEGMENT BELOW 16 MEG
 OBJINFO....:
 GT_16MB....:  NO
 DISKS......:
 SEGREQ.....:
 PRODID.....:  5654A23A DEBUG
 BLDPARMS...:  PPF(5654A23A DEBUG EVFWBLBB)



VMFSMD2760I SEGINFO processing completed SUCCESSFULLY

 F1=Help     F2=Get Obj   F3=Exit      F4=Add Line  F5=Map        F6=Chk MEM
 F7=Bkwd     F8=Fwd       F9=Retrieve F10=Seginfo   F11=Adj MEM   F12=Cancel
====>
```

Figure 15. Add Segment Definition panel showing the new segments

6 On the Add Segment Definition panel, make the following changes, as necessary, to define your test user-side segment:

- If you have created a PPF override file, you should specify the name of your override by typing over 5654A23A in the BLDPARMS fields.
- You may change the name of the segment by typing over the information in the OBJNAME field.
- You may change the addresses of the segments by typing over the information in the DEFPARMS field.

7 Go back to the Segment Map panel.

F5

F5 will return you to the Segment Map panel. See Figure 16 for the refreshed Segment Map panel that will be displayed.

```
                            VMFSGMAP - Segment Map                  More: -
                                                                 Lines nn tonn of nn


Meg            000-MB          001-MB          002-MB          003-MB
St Name    Typ 0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
M CMS      SYS W-W------------1.............2.............3.............

Meg            004-MB          005-MB          006-MB          007-MB
St Name    Typ 0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
  CMSPIPES DCS 4.............5.............6.............RRRRRR----------

Meg             008-MB          009-MB          00A-MB          00B-MB
St Name    Typ 0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
P SEQBSEG  DCS >.............RRRRRRRRRRRRRRRA.....................RRRRR>

Meg             00C-MB          00D-MB          00E-MB          00F-MB
St Name    Typ 0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
M CMS      SYS C.............D.............E.............RRRRRRRRRRRRRRR>

================================ 16-MB Line ================================

Meg             010-MB          011-MB          012-MB          013-MB
St Name    Typ 0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
M CMS      SYS >RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR

Meg             028-MB          029-MB          02A-MB          02B-MB
St Name    Typ 0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
P SEQASEG  DCS RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR>RRRRRR

Meg             02C-MB          02D-MB          02E-MB          02F-MB
St Name    Typ 0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
P SEQASEG  DCS >RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRF.........RRRRRR

 F1=Help     F2=Chk Obj   F3=Exit      F4=Chg Obj   F5=File       F6=Save
 F7=Bkwd     F8=Fwd       F9=Retrieve  F10=Add Obj  F11=Del Obj   F12=Cancel
====>
```

Figure 16. Segment Map panel with added segments.

8 Save the new information and exit from the Segment Map panel.

F5

F5 saves all changed information and exits the map panel.

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

9 Prepare to build the segments.

a IPL CMS to clear the virtual storage

ipl cms parm clear nosprof instseg no ***** DO NOT press ENTER at the VM READ!*****	IPL CMS to clear your virtual machine. This command bypasses the execution of the system profile (SYSPROF EXEC) and without loading the installation saved segment (CMSINST).
access (noprof	Bypass the execution of the PROFILE EXEC.

b Access the VMSES/E code

```
access 5e5 b
```

c Establish write access the Software Inventory Disk

```
link MAINT 51d 51d mr
access 51d d
```

10 Issue VMFBLD command to build the Debug Tool segments.

```
vmfbld ppf segbld esasegs segblist SEQBSEG (serviced
vmfbld ppf segbld esasegs segblist SEQASEG (serviced
```

Note: If you received the message:

```
VMFBDS2003W The SYSTEM SEGID D(51D) file has been changed and must
            be moved to the S disk.
```

then the SYSTEM SEGID file on the CMS system disk (MAINT 190) and CMS test system disk (MAINT 490) must be updated. You need to log on to your MAINT user ID and copy the SYSTEM SEGID file from the MAINT 51D disk to the MAINT 190 and MAINT 490 disks. (The SYSTEM SEGID must have a filemode of **2**.)

Sample z/VM™ Version 5 Release 1 console output

```
VMFBLD2760I VMFBLD processing started
VMFBLD1851I Reading build lists
VMFBLD2182I Identifying new build requirements
VMFBLD2182I New build requirements identified
VMFBLD1851I (1 of 1) VMFBDSEG processing SEGBLIST EXC00000 D, target
            is BUILD 51D (D)
VMFBDS2115I Validating segment SEQASEG
VMFBDS2002I A DEFSEG command will be issued for 1 segment(s).
VMFBDS2219I Processing object SEQASEG.SEGMENT
DMSDCS358E Skeleton segment SEQASEG has already been reserved
HCPNSS440I Saved segment SEQASEG was successfully saved in fileid 0027.
VMFBDS2003W The SYSTEM SEGID D(51D) file has been changed and must
            be moved to the S disk.
VMFBLD1851I (1 of 1) VMFBDSEG completed with return code 4
VMFBLD2180I There are 0 build requirements remaining
VMFBLD2760I VMFBLD processing completed with warnings
Ready;
VMFBLD2760I VMFBLD processing started
VMFBLD1851I Reading build lists
VMFBLD2182I Identifying new build requirements
VMFBLD2182I New build requirements identified
VMFBLD1851I (1 of 1) VMFBDSEG processing SEGBLIST EXC00000 D, target
            is BUILD 51D (D)
VMFBDS2115I Validating segment SEQBSEG
VMFBDS2002I A DEFSEG command will be issued for 1 segment(s).
VMFBDS2219I Processing object SEQBSEG.SEGMENT
DMSDCS358E Skeleton segment SEQASEG has already been reserved
HCPNSS440I Saved segment SEQBSEG was successfully saved in fileid 0028.
VMFBDS2003W The SYSTEM SEGID D(51D) file has been changed and must
            be moved to the S disk.
VMFBLD1851I (1 of 1) VMFBDSEG completed with return code 4
VMFBLD2180I There are 0 build requirements remaining
VMFBLD2760I VMFBLD processing completed with warnings
Ready;
```

End of Sample z/VM™ Version 5 Release 1 console output

Appendix A. Create Product Parameter File (PPF) Override

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

Note: Do **not** modify the product supplied 5654A23A $PPF or 5654A23A PPF files to change the file pool name or any other installation parameters. If the 5654A23A $PPF file is serviced, the existing $PPF file will be replaced, and any changes to that file will be lost; by creating your own $PPF override, your updates will be preserved.

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

1 Create a new $PPF override file, or edit the override file created via the 'Make Override Panel' function.

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

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

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

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

2 Create (or modify as required) the Variable Declarations (:DCL.) section for the DEBUGSFS override area, so that it resembles the :DCL. section shown below. This override will be used for the installation of Debug Tool.

```
:OVERLST. DEBUGSFS
*
* ================================================================== *
* Override Section for Initial Installation (Using SFS Directories)   *
* ================================================================== *
:DEBUGSFS. DEBUGSFS 5654A23A
:DCL. REPLACE
&191              DIR MYPOOL1:5654A23A.
&LMODZ            DIR MYPOOL1:5654A23A.DEBUG.LOCAL
&DELTZ            DIR MYPOOL1:5654A23A.DEBUG.DELTA
&APPLY            DIR MYPOOL1:5654A23A.DEBUG.ALTAPPLY
&APPLZ            DIR MYPOOL1:5654A23A.DEBUG.PRODAPPLY
&BASE1Z           DIR MYPOOL1:5654A23A.DEBUG.OBJECT
&BLD0Z            DIR MYPOOL1:5654A23A.DEBUG.TBUILD
&5654A23A   USER  5654A23A
:EDCL.
:END.
*
```

(This override will replace the :DCL. section of the DEBUGSFS override area of the 5654A23A $PPF file.)

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

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

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

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

Now that the *overname* PPF file has been created, you should specify *overname* instead of 5654A23A as the PPF name to be used for those VMSES/E commands that require a PPF name.

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Necessity of all installation tasks	1	2	3	4	5	N
Accuracy of the definition of the installation tasks	1	2	3	4	5	N
Technical level of the installation tasks	1	2	3	4	5	N
Installation verification procedure	1	2	3	4	5	N
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Ease of migrating the product from a previous release	1	2	3	4	5	N
Ease of putting the system into production after installation	1	2	3	4	5	N
Ease of installing service	1	2	3	4	5	N

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  - □ Package

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

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  - □ No
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    How many years of experience do they have? _____
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GI10-8669-00