



Program Directory for IBM z/VM Directory Maintenance Facility Feature

function level 510

Program Number 5741-A05

for Use with
z/VM version 5

Document Date: December 2005

GI11-4798-01

Note!

Before using this information and the product it supports, be sure to read the general information under "Notices" on page 59.

This program directory, dated December 2005, applies to z/VM Directory Maintenance Facility Feature, function level 510 (DirMaint™), Program Number 5741-A05.

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Summary of Changes

The following describes the different revision indicators used and the timeframe when they were inserted:

- 1 • The -01 suffix level is December 2005 (concurrent with z/VM V5.2).
- The -00 suffix level is September 2004.

DirMaint™ Web Information

The DirMaint web page can be visited at URL:

www.ibm.com/eserver/zseries/zvm/related/dirmaint

There you will find:

- Additional useful information, hints, and tips.
- A postscript version of the DirMaint FL510 program directory available for downloading.
- A PDF version of the DirMaint FL510 program directory available for viewing.
- The ability to subscribe to future updates.

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 DirMaint. You should read all of this program directory before installing the program and then keep it for future reference.

When you are ready to install DirMaint, read section 3.1, "Preventive Service Planning" on page 7. This section tells you how to find any updates to the information and procedures in this program directory.

The program directory contains the following sections:

- 2.0, "Program Materials" on page 4 identifies the basic and optional program materials and documentation for DirMaint.
- 3.0, "Program Support" on page 7 describes the IBM support available for DirMaint.
- 4.0, "Program and Service Level Information" on page 8 lists the APARs (program level) and PTFs (service level) incorporated into DirMaint.
- 5.0, "Installation Requirements and Considerations" on page 9 identifies the resources and considerations for installing, migrating and using DirMaint.
- 6.0, "Installation Instructions" on page 20 provides detailed installation and customization instructions for DirMaint.
- 7.0, "Service Instructions" on page 29 provides detailed servicing instructions for DirMaint.
- Appendix A, "Local Modification Example: \$EXEC File" on page 44 provides a local modification example for DirMaint.
- Appendix B, "Applying a Recommended Service Upgrade (RSU) For DirMaint" on page 47 provides detailed RSU installation instructions for DirMaint.
- Appendix C, "Creating a Product Parameter File (PPF) Override" on page 53 provides instructions on overriding the VMSYS file pool name for DirMaint.
- Appendix D, "Disabling DirMaint" on page 57 provides a description of disabling DirMaint FL510, when DirMaint is not licensed.

1.1 Program Description

z/VM Directory Maintenance Facility Feature provides:

- Commands to allow general users to control those portions of their directory entry not directly affecting their privileges or resources, relieving the system administrators of this chore;
- Commands to allow system administrators to easily make updates to the directory affecting user privileges and resource allocations, improving productivity;
- Integrity checking and verification services to avoid accidental damage to the directory or overlapping of DASD allocations.

1.2 Enhancements for z/VM Directory Maintenance Facility Feature

1 The following enhancements were made in DirMaint FL510 in support of z/VM V5.2:

- 1 • The PTF for APAR VM63700 provides the necessary function to support near 1 TB SCSI disks.
- 1 • The PTF for APAR VM63733 provides the necessary function to support the following:
 - 1 – Simplified user administration with the coordination of DirMaint and RACF changes.
 - 1 – Improved DirMaint directory management performance by allowing changes to the online directory without requiring reprocessing of the entire directory.
 - 1 – Support for the CRYMeasure keyword on the OPTION statement for Crypto Express 2
 - 1 Accelerator.

The following enhancements were made in DirMaint FL510; compared to DirMaint FL410:

- Publications library refresh
- Introduction of DirMaint-RACF connector
- Addition of DASD management commands, e.g. DASD DASDM
- Support for SMAPI
- Introduction of FLASHCOPY for CLONEDISK commands for faster results
- Five new user exits.

The following enhancements were made in DirMaint FL410; compared to DirMaint 1.5.0:

- z/VM Directory Maintenance Facility Feature is pre-installed disabled on z/VM.
- z/VM Directory Maintenance Facility Feature service is now available on the stacked RSU.

The following enhancements were made in DirMaint V1.5.0: compared to DirMaint 1.4.0:

- VMSES/E Enablement for installation and service
- Publications library refresh
- Improved networking support
- Distributed administration
- Providing separate commands to manipulate every directory statement reducing the need for get/replace
- Provide six new user exits and twenty-six new system exits
- Changing the way DASD allocation is done based on size of disk to minimize fragmentation
- No longer holds a work unit lock if the work unit fails
- Conditionally eliminate printed password warning notices
- Purge old reader file notices
- Supporting set password as being already in the warning period

- Elimination of the 15 minute wait between consecutive VM minidisk requests
- Exploiting DFSMS/VM® copy function if DFSMS is installed
- No longer arbitrarily upper case directory file information
- Support alternate source and alternate object directories

2.0 Program Materials

An IBM program is identified by a program number and a feature code. The program number for DirMaint is 5741-A05.

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

The following sections identify:

- The basic and optional program materials available with this program

2.1 Basic Machine-Readable Material

DirMaint is distributed pre-installed as part of the z/VM version 5 system deliverables. Therefore there are no basic machine readable materials. DirMaint is a priced feature, so it is installed disabled. **If you want to enable and use DirMaint then you MUST order the z/VM Directory Maintenance Facility Feature to obtain a license for it.** Refer to the appropriate z/VM version 5 software announcement for information on ordering z/VM version 5 and its features.

2.2 Optional Machine-Readable Material

There are no optional machine-readable materials for DirMaint.

2.3 Program Publications

The following sections identify the basic and optional publications for DirMaint.

2.3.1 Basic Program Publications

One copy of the following is included when you order the basic materials for DirMaint.

Figure 1. Basic Material: Unlicensed Publications

Publication Title	Form Number
Program Directory for IBM z/VM Directory Maintenance Facility Feature	GI11-4798

2.3.2 Base Program Publications

Figure 2 identifies the base program publications associated with DirMaint.

Figure 2. Program Publications: New Editions

Publication Title	Form Number
Directory Maintenance Facility Tailoring and Administration Guide	SC24-6135
Directory Maintenance Facility Command Reference	SC24-6133
Directory Maintenance Facility Messages	SC24-6134

2.3.3 Softcopy Publications

The DirMaint publications are supplied softcopy as part of the *IBM Online Library: z/VM Collection* in BookManager® and Adobe™ Portable Document Format (PDF). One copy of the *z/VM Collection* CD-ROM is included when you order the basic materials for z/VM V5.1 and z/VM V5.2. For z/VM V5.2 one copy of the *z/VM Collection* on DVD is also included.

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

www.ibm.com/eserver/zseries/zvm/library

The z/VM publications can be ordered separately, for a fee, using the specific publication number through the IBM Publication Center at:

www.ibm.com/shop/publications/order

The Publications Center is a world wide central repository for IBM product publications and marketing material. Furthermore, a large number of publications are available online in various file formats (e.g. Adobe PDF), which can currently be downloaded free of charge.

2.4 Microfiche Support

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

2.5 Publications Useful During Installation and Service

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

Figure 3 (Page 1 of 2). Publications Useful During Installation / Service on z/VM version 5

Publication Title	Form Number
Directory Maintenance Facility Tailoring and Administration Guide	SC24-6135
z/VM: VMSES/E Introduction and Reference	GC24-6130
z/VM: Service Guide	GC24-6117

1 *Figure 3 (Page 2 of 2). Publications Useful During Installation / Service on z/VM version 5*

1 Publication Title	Form Number
z/VM: CP Planning and Administration	SC24-6083
z/VM: CP Commands and Utilities Reference	SC24-6081
z/VM: CMS Commands and Utilities Reference	SC24-6073
z/VM: CMS File Pool Planning, Administration, and Operation	SC24-6074
1 z/VM: Guide for Automated Installation and Service	GC24-6099
1 z/VM: System Messages and Codes - CP (V5.1)	GC24-6119
1 z/VM: System Messages and Codes - CMS and REXX/VM (V5.1)	GC24-6118
1 z/VM: System Messages and Codes - AVS, Dump Viewing Facility, GCS, TSAF, and VMSES/E 1 (V5.1)	GC24-6120
1 z/VM: CP Messages and Codes (V5.2)	GC24-6119
1 z/VM: CMS and REXX/VM Messages and Codes (V5.2)	GC24-6118
1 z/VM: Other Components Messages and Codes (V5.2)	GC24-6120

1 **Note:** The names of the messages and codes publications have been changed on z/VM V5.2 but the
1 publication numbers are the same.

3.0 Program Support

This section describes the IBM support available for DirMaint.

3.1 Preventive Service Planning

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

Figure 4. PSP Upgrade and Subset ID

Retain				
COMPID	Release	Upgrade	Subset	Description
5749DVH00	510	DIRM510	DIRM/510	Install information
5749DVH00	510	DIRM510	yynnRSU	RSU service recommendations

Note: RSU-BY-LVL information can be obtained from the vm service rsu web site at url:

www.ibm.com/eserver/zseries/zvm/service/rsu

3.2 Statement of Support Procedures

When you order z/VM Directory Maintenance Facility Feature, you are entitled to support under the basic warranty for z/VM version 5. Also, note that the Software Subscription and Support for z/VM Directory Maintenance Facility Feature is *automatically* added to your order - this provides zSeries® service to which you are likely accustomed. If you do not want the Software Subscription and Support for DirMaint, then you must take specific action to decline it when ordering DirMaint. Refer to the applicable z/VM version 5 software announcement for ordering information.

Report any difficulties you have using this program to your IBM Support Center. If an APAR is required, the Support Center will provide the address to which any needed documentation can be sent.

Figure 5 identifies the component IDs (COMPID), Retain Release and Field Engineering Service Numbers (FESN) for DirMaint.

Figure 5. Component IDs

Retain			
COMPID	Release	Component Name	FESN
5749DVH00	510	DirMaint FL510	6415301

4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of DirMaint. 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 cumulative service is also provided.

4.1 Program Level Information

The following APAR fixes against previous release of DirMaint have been incorporated into this release:

VM62857	VM62963	VM63122	VM63259	VM63286	VM63378
VM62886	VM62975	VM63136	VM63222	VM63331	VM63338
VM62898	VM62989	VM63221	VM63255	VM63334	VM63356
VM62907	VM63033	VM63237	VM63265	VM63310	VM63383
VM62908	VM63006	VM63251	VM63301	VM63315	VM63467
VM62933	VM63111	VM63214	VM63272	VM63332	VM63476

4.2 Service Level Information

Check the DIRM510 PSP bucket for any additional PTFs that should be installed or any additional install information. This can be accomplished by checking with your IBM Support Center or using IBMLink (ServiceLink). In addition, review the z/VM Directory Maintenance Facility Feature web page at:

www.ibm.com/eserver/zseries/zvm/related/dirmaint

for any additional service hints, tips, and concerns.

4.3 Cumulative Service

Cumulative service for DirMaint is available through a periodic, preventive service deliverable, the Recommended Service Upgrade (RSU). The RSU is used to provide service updates for multiple z/VM components and features (including DirMaint) and is often referred to as a *stacked* RSU.

See the PSP bucket upgrade DIRM510 and subset yynnRSU (where yynn is the year and the RSU service level) for the latest RSU available. For the list of PTF's included on the RSU, see the RSU service memo on the deliverable or the VM service web site.

The stacked RSU can be obtained by ordering PTF UM975n0 ; where *n* indicates the release of z/VM version 5.

5.0 Installation Requirements and Considerations

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

5.1 Hardware Requirements

There are no special hardware requirements for DirMaint.

5.2 Program Considerations

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

5.2.1 Operating System Requirements

DirMaint FL510 supports the following VM operating systems:

- z/VM version 5

5.2.2 Other Program Product Requirements

No other products are required for DirMaint.

1 5.2.3 Migration Considerations

1 If you use the new migration procedure, as documented in the *z/VM: Guide for Automated Installation and*
1 *Service*, to migrate DirMaint FL510 from a z/VM V5.1 system to z/VM V5.2, then the customizable files will
1 be migrated to z/VM V5.2, where possible. If the customizable files have been changed on the new
1 serviced level of DirMaint and you have made changes to them on your z/VM V5.1 system, then you will
1 be told to rework your changes. The DirMaint directory file disks, (e.g. 1DF) will not be migrated, nor will
1 the customizable files on those disks.

5.2.4 Program Installation/Service Considerations

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

- 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 *z/VM: VMSES/E Introduction and Reference* manual, section 'Changing the Software Inventory to an SFS Directory', for information on how to make this change.

- RSUs will be supplied as necessary. Service between RSUs can be obtained via CORrective service.
- A section of the *Directory Maintenance Facility Tailoring and Administration Guide* entitled "Directory Entries for the DirMaint Machines" provides useful background information on the server directories.

5.3 DASD Storage and User ID Requirements

Sections 5.3.1, "Required DASD Storage for DirMaint" on page 12 and 5.3.2, "Required DASD Storage for DirMaint Based on Source Directory Size" on page 16 lists the user IDs and minidisks that are required to install and service DirMaint. Sections 5.3.3, "Optional DASD Storage for DirMaint" on page 17 and 5.3.4, "Optional DASD Storage for DirMaint Based on Source Directory Size" on page 18 lists the user IDs and minidisks that are optional for DirMaint.

Important Installation Notes:

Note - z/VM Automated Service Procedure

If you modify any of the IBM-supplied default user IDs, minidisk addresses, or SFS directory names associated with DirMaint and you plan on using the z/VM automated service procedure (the **SERVICE** and **PUT2PROD** commands) to service your z/VM system, then you must create a PPF override for the **SERVP2P \$PPF** file.

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

- The user IDs and minidisks shown in Figure 6 on page 12 through Figure 9 on page 18 are already defined when you install z/VM version 5 because DirMaint is preinstalled on the system DDR.
- 5VMDIR10 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. See Appendix C, "Creating a Product Parameter File (PPF) Override" on page 53 for an example of creating a PPF override.
- If you chose to change the installation user ID, you must ensure that all the default virtual minidisk addresses for DirMaint are unique on the new installation user ID. You will have to create a PPF override to change any minidisk address conflicts. Use of the shared file system will help reduce these conflicts. However, any disk with *NONSFS listed in the SFS 4K block column of Figure 6 on page 12 must remain a minidisk.
- The DIRMSAT user ID and minidisk resources are only required if you plan on using a DirMaint Satellite server machine. This server is only necessary if you plan on maintaining multiple object directories on a single system or within a Cross System Extension (CSE) cluster. If this is not your environment, then there is no need to obtain the DIRMSAT user ID or any of the resources it owns.

- The DIRMAINT 15D minidisk is **only** required if you plan on using a DirMaint Satellite server (DIRMSAT) machine. Otherwise, the 15D minidisk should not be defined for the DIRMAINT user ID.

5.3.1 Required DASD Storage for DirMaint

The table in Figure 6 contains the required DASD for the 5VMDIR10, MAINT, and DirMaint server user IDs in order to install and service DirMaint FL510.

Important DASD Notes:

- Most of the minidisks are already defined on the z/VM System deliverables. If you need to add a minidisk then it **MUST** be CMS formatted.
- **It is not recommended** that the 5VMDIR10 492, 491, 41F, or 11F minidisks, or any disks owned by DirMaint servers reside in a shared file system directory. In the event of shared file system problems, it may be impossible to make any directory changes. And it is possible that one or more directory changes, such as allocating more DASD space, may be necessary to make the shared file system operational again. The DIRMAINT 15D minidisk must not reside in a shared file system directory.
- The DIRMAINT 1AA, and 1FA, the DATAMOVE 1AA, and the DIRMSAT 1AA minidisks are in the required list since they are strongly recommended.
 - The 1AA minidisks are used to maintain history files for debugging purposes. If your system has an ESM (external security manager) that allows for authorized virtual machines to write log records into the ESM audit trail, then you may wish to omit the 1AA minidisks in favor of the ESM's audit trail.
 - If you have a DIRMAINT V1.4.0 112 minidisk, you can use that disk in place of the DIRMAINT 1FA minidisk by customizing the DVHPROFA DIRMAINT file.

Figure 6 (Page 1 of 4). DASD Storage Requirements for (Required) Target Minidisks

Minidisk owner (user ID)	Default Address	Storage in Cylinders		FB-512 Blocks	SFS 4K Blocks	Usage
		DASD	CYLS			Default SFS Directory Name
5VMDIR10	2B2	3390	13	18720	2340	Contains all of the base code shipped with DirMaint VMSYS:5VMDIR10.DIRM.OBJECT
Notes:						
1. Cylinder values defined in this table are based on a 4k block size. FB-512 and SFS block values are derived from the 3390 cylinder values in this table.						
2. *NONSFS in the SFS 4K block column means that disk cannot be installed to the shared file system and must remain a minidisk.						
3. Cylinder values for the 2B1 minidisk are based on the source files in packed format. In order to create updates and assemble the files they will need to be unpacked. Disk sizes unpacked will be approximately double that which is shown in this table.						
4. Directory entries for the DATAMOVE 5F0 and 5FF minidisks are required for DASD management processing. These directory entries are used as a place holder. A physical 3380 DASD volume with a label of \$\$\$\$\$\$ is not needed.						

Figure 6 (Page 2 of 4). DASD Storage Requirements for (Required) Target Minidisks

Minidisk owner (user ID)	Default Address	Storage in Cylinders		FB-512 Blocks	SFS 4K Blocks	Usage
		DASD	CYLS			Default SFS Directory Name
5VMDIR10	2B1	3390	10	14400	1800	Contains optional source files (3*) VMSYS:5VMDIR10.DIRM.SOURCE
5VMDIR10	2C2	3390	2	2880	360	Used for DirMaint sample files VMSYS:5VMDIR10.DIRM.SAMPLE
5VMDIR10	2C4	3390	1	1440	180	Used for user local modifications for DirMaint VMSYS:5VMDIR10.DIRM.LOCALMOD
5VMDIR10	2D2	3390	50	72000	9000	Contains serviced files VMSYS:5VMDIR10.DIRM.DELTA
5VMDIR10	2A6	3390	4	5760	720	Contains AUX files and version vector table that represents your test level of DirMaint VMSYS:5VMDIR10.DIRM.APPLYALT
5VMDIR10	2A2	3390	4	5760	720	Contains AUX files and version vector table that represent your production level of DirMaint VMSYS:5VMDIR10.DIRM.APPLYPROD
5VMDIR10	29D	3390	9	12960	1620	Contains American English help files for DirMaint VMSYS:5VMDIR10.DIRM.HELP
5VMDIR10	29E	3390	1	1440	180	Test disk for DirMaint code belonging on MAINT's 19E VMSYS:5VMDIR10.DIRM.MAINT19E

Notes:

1. Cylinder values defined in this table are based on a 4k block size. FB-512 and SFS block values are derived from the 3390 cylinder values in this table.
2. *NONSFS in the SFS 4K block column means that disk cannot be installed to the shared file system and must remain a minidisk.
3. Cylinder values for the 2B1 minidisk are based on the source files in packed format. In order to create updates and assemble the files they will need to be unpacked. Disk sizes unpacked will be approximately double that which is shown in this table.
4. Directory entries for the DATAMOVE 5F0 and 5FF minidisks are required for DASD management processing. These directory entries are used as a place holder. A physical 3380 DASD volume with a label of \$\$\$\$\$\$ is not needed.

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Figure 6 (Page 3 of 4). DASD Storage Requirements for (Required) Target Minidisks

Minidisk owner (user ID)	Default Address	Storage in Cylinders		FB-512 Blocks	SFS 4K Blocks	Usage
		DASD	CYLS			Default SFS Directory Name
5VMDIR10	492	3390	10	14400	*NONSFS	Test disk for DirMaint servers, also contains sample directories and other system files and new source files. Also servers 192 disk
5VMDIR10	491	3390	10	14400	*NONSFS	Production disk for DirMaint servers, also servers 191 disk
5VMDIR10	41F	3390	8	11520	*NONSFS	Test disk for DirMaint interface code
5VMDIR10	11F	3390	8	11520	*NONSFS	Production disk for DirMaint interface code also servers 11F disk
5VMDIR10	191	3390	9	12960	1620	5VMDIR10 user ID's 191 minidisk VMSYS:5VMDIR10.
MAINT	19E	3390	1	1440	180	Production disk for DirMaint user exec.
DATAMOVE	155	3390	9	12960	*NONSFS	Server's A-disk
DIRMSAT	155	3390	9	12960	*NONSFS	Server's A-disk
DIRMAINT	1AA	3390	9	12960	*NONSFS	Contain CONSOLE and TRANSLOG files
DATAMOVE	1AA	3390	9	12960	*NONSFS	Contain CONSOLE and TRANSLOG files
DIRMSAT	1AA	3390	9	12960	*NONSFS	Contain CONSOLE and TRANSLOG files
DIRMAINT	15D	3390	1	1440	*NONSFS	Intersystem locking disk Required when using Satellite servers
DIRMAINT	1FA	3390	9	12960	*NONSFS	Temporary storage for arriving spool files
DATAMOVE	1FA	3390	9	12960	*NONSFS	Temporary storage for arriving spool files
DIRMSAT	1FA	3390	9	12960	*NONSFS	Temporary storage for arriving spool files

Notes:

1. Cylinder values defined in this table are based on a 4k block size. FB-512 and SFS block values are derived from the 3390 cylinder values in this table.
2. *NONSFS in the SFS 4K block column means that disk cannot be installed to the shared file system and must remain a minidisk.
3. Cylinder values for the 2B1 minidisk are based on the source files in packed format. In order to create updates and assemble the files they will need to be unpacked. Disk sizes unpacked will be approximately double that which is shown in this table.
4. Directory entries for the DATAMOVE 5F0 and 5FF minidisks are required for DASD management processing. These directory entries are used as a place holder. A physical 3380 DASD volume with a label of \$\$\$\$\$\$ is not needed.

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5.3.2 Required DASD Storage for DirMaint Based on Source Directory Size

The following table contains the required DASD for the DIRMAINT server whose disk size is based on the source directory size.

<i>Figure 7. DASD Storage Requirements for Required DIRMAINT Disks Based on Source Directory Size</i>			
Minidisk owner (user ID)	Default Address	Calculation for Storage in Cylinders	Usage
DIRMAINT	155	Two Times the Source Directory Size	DIRMAINT server's A-disk
DIRMAINT	1DF	Two times the Source Directory Size	Contains the primary directory files
DIRMAINT	1DB	Three Times the Source Directory Size	Contains the USER BACKUP file
<p>Notes:</p> <ol style="list-style-type: none"> 1. It is not recommended that any disks owned by DirMaint servers reside in a shared file system directory. In the event of shared file system problems, it may be impossible to make any directory changes. And it is possible that one or more directory changes, such as allocating more DASD space, may be necessary to make the shared file system operational again. 2. All the disks defined in this table MUST be CMS formatted. 			

5.3.3 Optional DASD Storage for DirMaint

The following table contains the optional DASD for the 5VMDIR10, MAINT, and DirMaint server user IDs in order to install optional source, install and service Uppercase English help files, copy American English help files to MAINT's 19D minidisk, and for DirMaint backup minidisks.

Figure 8. DASD Storage Requirements for (Optional) Target Minidisks

Minidisk owner (user ID)	Default Address	Storage in Cylinders		FB-512 Blocks	SFS 4K Blocks	Usage
		DASD	CYLS			Default SFS Directory Name
5VMDIR10	502	3390	9	12960	1620	Contains Upper Case English help files for DirMaint VMSYS:5VMDIR10.DIRM.HELPU
MAINT	19D	3390	9	12960	1620	Production disk containing American English help files for DirMaint
MAINT	402	3390	9	12960	1620	Production disk containing Upper Case English help files for DirMaint
DIRMAINT	1DE	3390	20	28800	*NONSFS	Delta object directory work edit disk.
DIRMAINT	2AA	3390	9	12960	*NONSFS	Contains a backup of the CONSOLE and TRANSLOG files.
DATAMOVE	2AA	3390	9	12960	*NONSFS	Contains a backup of the CONSOLE and TRANSLOG files.
DIRMSAT	2AA	3390	9	12960	*NONSFS	Contains a backup of the CONSOLE and TRANSLOG files.
Notes: <ol style="list-style-type: none"> 1. Cylinder values defined in this table are based on a 4k block size. FB-512 and SFS block values are derived from the 3390 cylinder values in this table. 2. *NONSFS in the SFS 4K block column means that disk cannot be installed to the shared file system and must remain a minidisk. 3. All the disks defined in this table MUST be CMS formatted. 4. The DIRMAINT 1DE disk must be allocated in the following manner: For CKD devices: cylinder 0 must be allocated as PERM space and cylinder 1 through END must be allocated as DRCT space. For FBA devices: pages 1 through 3 must be allocated as PERM space and pages 4 through END must be allocated as DRCT space. 						

5.3.4 Optional DASD Storage for DirMaint Based on Source Directory Size

The following table contains the optional DASD for the DIRMAINT server whose disk size is based on the source directory size.

Figure 9. DASD Storage Requirements for Optional DIRMAINT Disks Based on Source Directory Size

Minidisk owner (user ID)	Default Address	Calculation for Storage in Cylinders	Usage
DIRMAINT	2DF	Two Times the Source Directory Size	Contains a backup of the secondary directory files
DIRMAINT	2DB	Three Times the Source Directory Size	Contains a backup of the USER BACKUP file

Notes:

- It is not recommended** that any disks owned by DirMaint servers reside in a shared file system directory. In the event of shared file system problems, it may be impossible to make any directory changes. And it is possible that one or more directory changes, such as allocating more DASD space, may be necessary to make the shared file system operational again.
- All the disks defined in this table **MUST** be CMS formatted.

5.3.5 User ID Directory Information

User directory statements supplied in the 5VMDIR10 PRODPART file have user IDs that have privilege classes other than G. These privilege classes are required for the following reasons:

- The 5VMDIR10 install ID must have class E privilege for enabling z/VM Directory Maintenance Facility Feature.
- The DIRMAINT virtual machine must have class B privilege for any of the following:
 - Use of MSGNOH
 - Use of DIAGNOSE X'3C'
 - Use of DIAGNOSE X'84'
 - Use of DIAGNOSE X'A0' if RACF® or other ESM (External Security Manager) is installed
 - Use of DIAGNOSE X'D4' for SECLABEL use
- The DIRMAINT virtual machine must have class D privilege to issue the CP QUERY ALLOC command for determining system owned space. The DIRMAINT server will map these as used extents.

Note: There are risks associated with granting any user ID class D authority. You may prefer to create a separate class for the CP QUERY command and grant the DIRMAINT user ID authority to that class. See the *z/VM: CP Planning and Administration* for additional information on moving a command to a new class.

- The DATAMOVE virtual machine must have class B privilege for any of the following:
 - Use of MSGNOH
 - Use of DIAGNOSE X'D4' for SECLABEL use
- The DIRMSAT virtual machine must have class B privilege for any of the following:
 - Use of MSGNOH
 - Use of DIAGNOSE X'3C'
 - Use of DIAGNOSE X'84'
 - Use of DIAGNOSE X'D4' for SECLABEL use

Alternate privilege classes may be required if CP's user Class Restructure support has been used to redefine the system privileges. Some of these classes may not be required if RACF/VM, or an equivalent external security manager, is installed and the appropriate permissions have been granted to the service machines to issue the necessary commands and diagnose instructions.

6.0 Installation Instructions

Have you Licensed DirMaint?

DirMaint is pre-installed on z/VM version 5, using VMSES/E, in a DISABLED state. **If, and only if,** you have a license for DirMaint FL510 proceed with the installation to enable it for use.

Deploying Linux™ on z/VM

1 If you plan to deploy Linux on z/VM see the *z/VM: Getting Started with Linux on System z9™ and zSeries* publication for information on installing and setting up DirMaint and Linux virtual servers.

This chapter describes the installation methods and the step-by-step procedures to install and activate DirMaint. The step-by-step procedures are in two-column format. The steps to be performed are in bold, large numbers. Commands for these steps are on the left-hand side of the page in bold print. Additional information for a command may exist to the right of the command.

Each step of the installation instructions must be followed. Do not skip any step unless otherwise directed to. 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 DirMaint, adapt these instructions as needed for your environment.

6.1 VMSES/E Installation Process Overview

The following is a brief description of the main steps to complete the installation of DirMaint.

- Set DirMaint to the ENABLED state.
This will allow DirMaint to run.
- Perform Post-installation Tasks
Information about file tailoring and initial activation of the program is presented in 6.3, “Tailor the DirMaint Server Machines” on page 22.
- Place DirMaint Files into Production
Once the product files have been tailored and the operation of DirMaint is satisfactory, the product files are copied from the test BUILD disk(s) to production BUILD disk(s).

For a complete description of VMSES/E commands, refer to *z/VM: VMSES/E Introduction and Reference*.

6.2 Completing Your Installation of DirMaint

To complete the installation of DirMaint:

- 1 Log on to the **MAINT** user ID.
- 2 Establish write access to the Software Inventory Disk (MAINT 51D) if it is not already linked in write mode.

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 command to obtain write access to it. **Do not use *mw mode*.** Do not continue with these procedures until a R/W link is established to the 51D minidisk.

**link maint 51d 51d m
access 51d d**

The MAINT 51D disk is where the VMSES/E system level software inventory files reside.

- 3 Set DirMaint to the enabled state.

service dirm enable

This command will perform the following:

- Set DirMaint as ENABLED in VMSES/E and within CP
- Update the CP system configuration file (SYSTEM CONFIG) on the CP primary (default CF1) parm disk.

What's Next?

Continue with 6.3, "Tailor the DirMaint Server Machines" on page 22.

Notes:

1. If, in the future, you are no longer licensed for DirMaint FL510, you **must** follow the instructions in Appendix D, "Disabling DirMaint" on page 57 to disable DirMaint.

6.3 Tailor the DirMaint Server Machines

This section is required. You will initialize the server machines with the DirMaint code. Additionally you will tailor the server machines for your operating environment. After completion of this section, DirMaint will be installed in test mode. This means the RUNMODE= entry in the CONFIG DATADVH file on the 41F minidisk will be set to *testing*. In this mode the DIRMAINT server will not place the source directory online. Any commands you issue to the DIRMAINT server are for test purposes only. When testing using the instructions found in Appendix E of the *Directory Maintenance Facility Tailoring and Administration Guide* (or the DirMaint web site), DirMaint will be in test mode only unless you change the RUNMODE= entry.

The following table describes:

- Sample files provided with DirMaint that have been installed to the 2C2 samples disk.
- The tailorable system file name of the sample file which the DirMaint servers will recognize and use.
- The minidisk where the DirMaint servers will look for the system file.
- The purpose of the system file.

For example, the CONFIG SAMPDVH sample file was copied as the CONFIG DATADVH system file on the 41F minidisk and is the DirMaint servers configuration file.

Figure 10 (Page 1 of 2). DirMaint FL510 Supplied Sample Files

Sample File Name	Configuration File Name	disk	File Description
ACCESS SAMPDVH	ACCESS DATADVH	29E	Provides location of user interface disk to the DIRMAINT EXEC.
AUTHDASD SAMPDVH	AUTHDASD DATADVH	1DF	Provides authorization of DASD requests for the DirMaint servers.
CONFIG SAMPDVH	CONFIG DATADVH	41F	Configuration file for the DirMaint servers.
CONFIGRC SAMPDVH	CONFIGRC DATADVH	41F	Configuration file for the DirMaint servers if using RACF. You need to move this file from 2C2 disk to the 41F disk if you are using RACF.
DATAMOVE SAMPDVH	DATAMOVE DATADVH	492	Defines key time events for the DATAMOVE server.
DIRMAINT SAMPDVH	DIRMAINT DATADVH	492	Defines key time events for the DIRMAINT server.
DIRMMAIL SAMPDVH	DIRMAINT NEWMAIL	41F	A file containing mail like information on the DirMaint product.
DIRMSAPI EXEC SAMP	DIRMSAPI EXEC	41F	Sample of how to use the DirMaint application programming interface. Copy this to any disk you wish to run it from.
DIRMSAT SAMPDVH	DIRMSAT DATADVH	492	Defines key time events for the DIRMSAT server.
DVHNAMES SAMPDVH	DVHNAMES DATADVH	492	Defines key system administration and support players and how to communicate with them.
DVHPROFD SAMPDVH	DVHPROFA DIRMAINT	492	Defines the disks which the DIRMAINT server will access when initialized.
DVHPROFM SAMPDVH	DVHPROFM DATADVH	492	Defines the disks which the DATAMOVE server will access when initialized.

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Figure 10 (Page 2 of 2). DirMaint FL510 Supplied Sample Files

Sample File Name	Configuration File Name	disk	File Description
DVHPROFS SAMPDVH	DVHPROFA DIRMSAT	492	Defines the disks which the DIRMSAT server will access when initialized.
150CMDS SAMPDVH	150CMDS DATADVH	41F	List of commands, command part handler routine, whether or not password authentication is required for processing the command, and the command set class for DIRMAINT 150A compatibility mode.
140CMDS SAMPDVH	140CMDS DATADVH	41F	List of commands, command part handler routine, whether or not password authentication is required for processing the command, and the command set class for DIRMAINT 140A compatibility mode.
EXTENT SAMPDVH	EXTENT CONTROL	1DF	Provides device specific information for the DirMaint servers.
PROFILE EXEC SAMP	PROFILE EXEC	492	Sample PROFILE EXEC for the DirMaint servers.

Warning!

Notes:

1. IN2PROD EXEC, which runs when placing the DirMaint code into production, will copy the system files located on the 41F and 492 test disks to the 11F and 491 production disks. To avoid possibly back leveling these files, you **should only** make changes to these files on the 41F and 492 test disks.
2. You should **never** change the CONFIG DATADVH file. Changes you desire to make to the configuration files should be accomplished using override files as described in the *Directory Maintenance Facility Tailoring and Administration Guide* manual.

6.3.1 Tailor the DirMaint Installation

Note!

This section will require 5VMDIR10 to have write access to the DIRMAINT 1DF disk. Before continuing, please make sure this disk is linked appropriately.

- 1 Log on to **5VMDIR10** if you are not already logged on to it.
- 2 Access the disk where the IN2PROD EXEC resides.

access 492 e

- 3 The file DVHPROFA DIRMAINT (located on the 5VMDIR10 492 minidisk) **must** have a filetype matching the user ID running the DIRMAINT server. If yours is not DIRMAINT, then rename this file to have a filetype matching the

DIRMAINT server user ID. The file DVHPROFA DIRMSAT (only necessary if using a satellite server, located on the 5VMDIR10 492 minidisk) **must** have a filetype matching the user ID running the DIRMSAT server. If yours is not DIRMSAT, then rename this file to have a filetype matching the DIRMSAT server user ID.

- 4 Access certain DirMaint server and 5VMDIR10 test build minidisks which contain your production tailorable system files using the IN2PROD exec.

in2prod access_new 5VMDIR10 {DIRM | DIRMSFS}

IN2PROD will access the DIRMAINT 1DF disk as filemode J, the 5VMDIR10 492 disk as filemode K, and the 5VMDIR10 41F disk as filemode L.

Use **DIRM** if installing to minidisks or **DIRMSFS** if installing to SFS.

- 5 The DIRMAINT, DATAMOVE, and DIRMSAT user ID's were created with a password of NOLOG on the z/VM version 5 system deliverable. Update the appropriate directory statements with valid passwords prior to continuing with the test instructions.

- 6 Create the USER INPUT file on the DIRMAINT 1DF disk. Your current monolithic directory must be copied to the DIRMAINT 1DF as USER INPUT for DirMaint's use. The 1DF disk was accessed as file mode J previously. The USER INPUT file must be a RECFM F LRECL 80 file when located on the 1DF disk.

- 7 If migrating from DirMaint V1.5.0 or FL410, copy the following files to your z/VM V5.1 installation:

- Any files listed in Figure 10 on page 22 which you have modified.
- All CONFIG_{nn} DATADVH files you created.
- Files for which no sample is supplied, such as:

AUTHFOR CONTROL
DVHLINK EXCLUDE
PROFILE XEDIT
PWMON CONTROL
RPWLIST DATA

- See Appendix F of the *Directory Maintenance Facility Tailoring and Administration Guide* (or the DirMaint web site) which lists all tailorable system files for DirMaint, what they are used for, and where an administrator can find more information.

- 8 See "Data Files" section of the "Tailoring the DIRMAINT Service Machine" chapter in the *Directory Maintenance Facility Tailoring and Administration Guide* for further details on configuring and tailoring each of the files that you just copied, along with any other relevant files which need to be configured, and for setting up the DirMaint server machine environments for your testing purposes.

Return here when you have completed all tailoring and setup work for the DirMaint servers.

What's Next?

You have now finished tailoring the DirMaint virtual machines. Continue with instructions found in Appendix E of the *Directory Maintenance Facility Tailoring and Administration Guide* (or the DirMaint web site). When complete, return to 6.4, "Place DirMaint Into Production" on page 26 to place the new DirMaint code into production.

6.4 Place DirMaint Into Production

Important note

This procedure should only be done when you have successfully tested DirMaint installation.

Placing the DirMaint code into production is a two step process:

- First the test code is moved from the test build disks to the server production minidisks.
- Then general user code is placed on the MAINT 19E minidisk making it available to all users.

6.4.1 Copy the Server Code to the Server Minidisks

This step will be accomplished by using the PUT2PROD EXEC, which will call the DirMaint IN2PROD EXEC. It will use the PPF name specified on the P2PPF tag in the VM SYSSUF file. If the *ppfname* being used is different, you will have to change VM SYSSUF by using the VMFUPDAT SYSSUF command. To find out more information on the PUT2PROD and VMFUPDAT commands refer to the *z/VM: VMSES/E Introduction and Reference*.

Warning!

The IN2PROD EXEC, called by PUT2PROD, will copy the system files located on the 41F and 492 test disks to the 11F and 491 production disks. To avoid possibly back leveling these files, you **should only** make changes to these files on the 41F and 492 test disks.

- 1** Log on to **MAINT**, if you are not already logged on to it.
- 2** If any of the DirMaint server machines, DIRMAINT, DATAMOVE, DIRMSTAT or 5VMDIR10 are logged on then you need to log them off. (You can use the Q NAMES command to see what user IDs are logged on. You can use the FORCE command to log off any user ID.)
- 3** Copy code from the test minidisks to the production minidisks.

put2prod dirm

6.4.2 Log On the Server Machines

This step will have you bring up the DirMaint server machines.

- 1** You need to make sure that RUNMODE= is set to *operational* in your override file (CONFIG nn DATADVH) to the CONFIG DATADVH file. If you ran the test instructions in the DirMaint Tailoring and Administration then your

CONFIG nn DATADVH file would reside on DIRMAINT's 155 minidisk; unless you moved it to the 41F minidisk (owned by user ID 5VMDIR10).

If you need to update your override file you can log on to the DIRMAINT user ID. You will need to hit the enter key twice in order to be able to enter the CMS XEDIT command to update your override file. Once you have completed your update you can run DVHBEGIN, then RLDDATA and finally #CP DISC to disconnect from this user ID.

2 Issue the following commands to reinitialize each DirMaint server. This must be done from a DirMaint privileged user (such as the MAINT user ID).

1 In the commands you may need to correct the system IPL to match the name
1 of the CMS saved system, or change it to IPL by device address rather than
1 by system name. It should match the IPL statement you included in the
1 DIRMAINT machine's directory entry, or the IPL statement included in the
1 profile used by the DIRMAINT machine's directory entry.

1 **a** For the DIRMAINT server

1 **1** If not currently running

1 **xautolog dirmaint**

1 **2** If running

1 **dirm cp ipl cms parm autocr**

1 **b** DATAMOVE server and DIRMSAT server (if you use it)

1 **1** If not currently running

1 **xautolog datamove**

1 **xautolog dirmsat**

1 **2** If running

1 **dirm datamove cp ipl cms parm autocr**

1 **dirm satellite cp ipl cms parm autocr**

6.4.3 Obtaining DirMaint HELP

In order to obtain DirMaint American English help, either of the following must be issued:

- DIRM HELP
- HELP DVHAMENG

In order to obtain DirMaint Uppercase English help, either of the following must be issued:

- DIRM HELP
- HELP DVHUCENG

The z/VM Directory Maintenance Facility Feature product is now installed and built on your system.

7.0 Service Instructions

Note - z/VM Automated Service Procedure

The **preferred** method for installing service to DirMaint is to use the z/VM automated service procedure (use of the **SERVICE** and **PUT2PROD** commands).

If you have chosen to use the automated procedure to apply preventive (RSU) and CORrective service to your z/VM system, you need to follow the service instructions documented in the *z/VM: Guide for Automated Installation and Service* manual, instead of those presented here.

RSU Warning

If applying a DirMaint RSU, go to the instructions in Appendix B, "Applying a Recommended Service Upgrade (RSU) For DirMaint" on page 47. You will return to a step in this chapter as specified in that appendix.

This section of the Program Directory contains the procedure to install **CORrective service** to DirMaint with VMSES/E.

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

Notes:

1. **Each step of the servicing instructions must be followed. Do not skip any step unless otherwise directed to.** All instructions showing accessing of disks or SFS directories assumes the use of default minidisk addresses or SFS directory names. If different minidisk addresses are used, change the instructions appropriately.
2. The 5VMDIR10 user ID should be a privileged DirMaint user in order to issue restricted commands to the DIRMAINT server during these instructions. The AUTHFOR CONTROL file contains a list of privileged user IDs.
3. If the service instructions are not completed at one time, you can link and access the MAINT 51D minidisk in R/W mode, then issue VMFSETUP and continue with the step where you left off.
4. Appendix F of the *Directory Maintenance Facility Tailoring and Administration Guide* (or the DirMaint web site) lists all tailorable system files for DirMaint, what they are used for, and where an administrator can find more information.

7.1 VMSES/E Service Process Overview

The overview will give a brief description of the main steps in servicing z/VM Directory Maintenance Facility Feature using VMSES/E.

- Merge Service
Use the VMFMRDSK command to clear the alternate apply disk before receiving new service. This allows you to easily 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 must be entered into the software inventory to allow VMSES/E to track the changes and build them into the system. See Chapter 7 in the *z/VM: Service Guide* for this procedure.
- Build a New Level
The build task generates the serviced level of an object and places the new object on a 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, re-saving the DCSS (Discontiguous Saved Segments), etc.

7.2 Servicing DirMaint

RSU Warning

If applying a DirMaint RSU, go to the instructions in Appendix B, "Applying a Recommended Service Upgrade (RSU) For DirMaint" on page 47. You will return to a step in this chapter specified in that appendix.

7.2.1 Prepare to Receive Service

Electronic Service (envelope file)

If you have received service electronically or on a CD-ROM, follow the appropriate instructions to retrieve and decompress the envelope files to your A-disk. The decompression is currently done by using the DETERSE module (shipped with VMSES/E).

- 1 The documentation envelope and the service (PTF) envelope files must have a file type of SERVLINK.
- 1 Make note of the file names that you are using as you will need to enter them in place of the variable *envfilename* in the VMFREC commands that follow.
- 1

The *ppfname* used throughout these instructions is **5VMDIR10**, which assumes you are using the PPF supplied by IBM for DirMaint. If you have your own PPF override file for DirMaint, you should use your file's *ppfname* instead of **5VMDIR10**. The *ppfname* you use should be used **throughout** the rest of this procedure, unless otherwise stated.

- 1** Log on to the DirMaint service user ID **5VMDIR10**
- 2** Establish write access to the Software Inventory Disk (MAINT 51D) if it is not already linked in write mode.

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 write access to it. **Do not use *mw* mode.**

**link maint 51d 51d m
access 51d d**

The MAINT 51D disk is where the VMSES/E system level software inventory files reside.

- 3** Have the DirMaint CORrective tape mounted and attached to **5VMDIR10** as 181. 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. VMFREC, with the INFO option, loads the documentation and displays a list of all the products on the media.

a If receiving from tape

vmfrec info

This command will load the service memo to the 191 disk.

b If receiving from an envelope file

1 **vmfrec info (env *envfilename***
1

envfilename is the file name of the documentation envelope (SERVLINK) file.

This command will load the service memo to the 191 disk.

- 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. To do this, use the PF5 key to show all status messages which identify the components with service.

- 6** Read the product memo (5VMDIR10 MEMO) before going on.

xedit 5VMDIR10 memo

- 7** Setup the correct minidisk access order

vmfsetup 5VMDIR10 {DIRM | DIRMSFS}

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

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

vmfmrdsd 5VMDIR10 {DIRM | DIRMSFS} apply

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

This command clears the alternate APPLY disk.

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

vmfview mrd

7.2.2 Receive the Service

Note: If you are installing multiple service tapes or envelope files, you can receive all of the service for this product 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 5VMDIR10 {DIRM | DIRMSFS}

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

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

1 **vmfrec ppf 5VMDIR10 {DIRM | DIRMSFS} (env *envfilename***

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

1
1

envfilename is the file name of the service (PTF) envelope (SERVLINK) file.

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 going on. For information about handling specific receive messages, see the applicable *z/VM: System Messages and Codes* or use online HELP.

vmfview receive

7.2.3 Apply the Service

1 Apply the new service

vmfapply ppf 5VMDIR10 {DIRM | DIRMSFS}

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

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 going on. For information about handling specific apply messages, see the applicable *z/VM: System Messages and Codes* or use online HELP.

vmfview apply

Note

If you get the message VMFAPP2120W then re-apply any local modifications before building the new DirMaint.

For further information on the local modification process, refer to the "Reworking Local Service and Modifications" chapter of the *z/VM: Service Guide*. Follow the steps that are applicable to your local modification.

The following substitutions need to be made in the *z/VM: Service Guide* when creating a local modification to DirMaint:

- **zvm** should be **5VMDIR10**
- *compname* should be **DIRM** or **DIRMSFS** (minidisk or SFS).
- *fm-local* should be the filemode where the 2C4 is accessed

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 *z/VM: Service Guide*, you should return back to this program directory at 7.2.4, "Update the Build Status Table" on page 35.

7.2.4 Update the Build Status Table

- 1 Update the Build Status Table with serviced parts.

vmfbld ppf 5VMDIR10 {DIRM | DIRMSFS} (status

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

This command updates the build status table.

Note

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

```
VMFB LD2760I VMFB LD processing started
```

```
VMFB LD2185R The following source product parameter files have been serviced:
```

```
VMFB LD2185R 5VMDIR10 $PPF
```

```
VMFB LD2185R When source product parameter files are serviced, all product  
parameter files built from them must be recompiled using VMFPPF  
before VMFB LD can be run.
```

```
VMFB LD2185R Enter zero (0) to have the latest levels of the source product  
parameter files copied to your A-disk and exit VMFB LD so you can  
recompile your product parameter files with VMFPPF  
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.

```
VMFB LD2188I Building 5VMDIR10 $PPF on 191 (A) from level $PFnnnn
```

vmfppf 5VMDIR10 {DIRM | DIRMSFS}

Note: If you've created your own PPF override then use your PPF name instead of 5VMDIR10.

You should recompile all overrides to ensure they are at the proper level for future use.

**copy 5VMDIR10 \$ppf a = = d (olddate replace
erase 5VMDIR10 \$ppf a**

Note: Do not use your own PPF name in place of 5VMDIR10 for the COPY and ERASE commands.

**vmfbld ppf 5VMDIR10 {DIRM | DIRMSFS} (status
1**

Re-issue the VMFB LD command to complete updating the build status table. Use your PPF name, if you have an override. When you receive the prompt that was previously displayed, enter a 1 to continue.

- 2 View the build status messages and see what objects need to be built.

vmfview build

7.2.5 Build Service Objects

- 1 Rebuild DirMaint serviced parts.

vmfbld ppf 5VMDIR10 {DIRM | DIRMSFS} (serviced

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

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

vmfview build

7.2.6 Additional Service Steps

- 1 Copy all CONFIG* DATADVH files from production disks back to test disks prior to placing the latest service into production.

in2prod test_config 5VMDIR10 {DIRM | DIRMSFS}

This step ensures any modifications made to the CONFIG* DATADVH configuration files since the last time service was applied exists on the test build disks prior to following the next into production steps.

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

- 2 Update the DirMaint tailorable system files from latest service of the sample tailorable system files. The IN2PROD exec will only replace files if it can determine the current level matches a serviced level, or is at a base level.

Note

The update_files option of IN2PROD requires write access to the DIRMAINT 1DF minidisk. Therefore the DIRMAINT server must be shutdown in order to complete this step.

in2prod update_files 5VMDIR10 {DIRM | DIRMSFS}

IN2PROD will update the tailorable system files on the 5VMDIR10 492, 41F, and 29E minidisks, and the DIRMAINT 1DF minidisk.

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

- 3 Remove obsolete files from the DELTA disk using the IN2PROD EXEC. The IN2PROD exec uses a default *ppfname* of **5VMDIR10** and a default *compname* of **DIRM**. If either the *ppfname* or *compname* being used is different, you will have to tell the IN2PROD exec the names you are using. To find out more information on the IN2PROD EXEC issue **in2prod {? | help}**.

in2prod clean_up pfname compname (count nn age nn action Erase|Test

IN2PROD will remove PTF part files on the 2D2 DELTA disk which have been obsoleted by more recent service. Parameters with the CLEAN_UP option are as follows:

count nn

nn is in the range of 1 to 10 indicating the number of duplicate files kept; the default is 2.

age nn

nn is in the range of 0 to 60 indicating the number of months to keep duplicate files; the default is 18.

action Erase|Test

Erase will cause obsolete files to be erase while *Test* will create files on the A-disk showing which files would be erased.

7.3 Optional Service Steps (depending on what was installed)

7.3.1 Servicing the Uppercase English Files

- 1 Re-build Uppercase English serviced parts

vmfbld ppf 5VMDIR10 {DIRMU | DIRMUSFS} (serviced setup)

Use component name **DIRMU** if help files are installed on minidisks or **DIRMUSFS** if help files are installed in SFS

The SETUP option sets up the minidisk/directory access order using the :MDA section of the PPF.

7.4 Test the New DirMaint Service

At this point you can test the service that was applied. Continue with instructions found in Appendix E of the *Directory Maintenance Facility Tailoring and Administration Guide* (or the DirMaint web site) for the minimum steps necessary for ensuring that your new code is functional. When your testing is complete, return to 7.5, "Place Serviced DirMaint into Production" to place the service into production.

7.5 Place Serviced DirMaint into Production

Important note

Notes:

1. This procedure should only be done when you have successfully tested the new service. Once you perform this step you can not easily back off to your previous production code. See the "Removing Service Levels" chapter in the *z/VM: Service Guide* for further details regarding backing off service levels.
2. Make sure the RUNMODE= entry of **your override file** to the CONFIG DATADVH file (on the 41F minidisk) has been set to *operational*.

Placing the DirMaint code into production is a two step process:

- First the test code is moved from the test build disks to the server production minidisks.
- Then the general user code is placed onto the MAINT 19E minidisk making the new DirMaint code available to all users.

7.5.1 Copy the Server Code to the Production Minidisks

This step will be accomplished by using the IN2PROD EXEC. The IN2PROD exec uses a default *ppfname* of **5VMDIR10** and a default *compname* of **DIRM**. If either the *ppfname* or *compname* being used is different, you will have to tell the IN2PROD exec the names you are using. To find out more information on the IN2PROD EXEC issue **in2prod {? | help}** after accessing the 492 minidisk.

Note: If you have arrived here from testing the DIRMAINT server, then the 5VMDIR10 user ID should have write access to the 491 and 11F minidisks when it is logged on. If this is not the case, then the DIRMAINT server will first have to be logged off.

- 1** Log on to 5VMDIR10, if you are not already logged on to it.
- 2** Access the disk where the IN2PROD EXEC resides

access 492 e

- 3** Use the IN2PROD exec to copy code from the 492 and 41F test minidisks to the 491 and 11F production minidisks.

in2prod prod 5VMDIR10 {DIRM | DIRMSFS}

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

logoff

7.5.2 Copy the DirMaint Production Code to MAINT's Minidisks

This step needs to be performed so that the new DirMaint code is available to general users to use.

- 1** Log on as **MAINT**

Note: The following steps should be done from the MAINT user ID so that the appropriate CMS shared segment can be saved.

- 2** Copy the system Y-disk code to MAINT's 19e disk

a If servicing using minidisks

link 5VMDIR10 29e addr rr

access addr e

access 19e f

vmfcopy * * e = f (prodid 5VMDIR10%DIRM replace olddate

addr is any free disk address on the MAINT user ID

Note: DirMaint users require files to be placed on the 19E disk.

b If servicing using SFS

```
access VMSYS:5VMDIR10.DIRM.MAINT19E e
access 19e f
vmfcopy * * e = = f (prodid 5VMDIR10%DIRM replace olddate
```

Note: DirMaint users require files placed on the 19E disk.

c Re-save the CMS saved system, to return the Y-disk (product code or MAINT's 19E disk) to 'shared' status. See the 'Placing (Serviced) Components into Production' section of the *z/VM: Service Guide* for detailed information about how to save the CMS saved system.

3 Copy American English help files to MAINT's 19D disk

a If servicing using minidisks

```
link 5VMDIR10 29d addr2 rr
access addr2 e
access 19d f
vmfcopy * * e = = f (prodid 5VMDIR10%DIRM replace olddate
```

addr2 is any free disk address on the MAINT user ID

Note: Users wishing to access DirMaint help files require the 19D disk.

b If servicing using SFS

```
access VMSYS:5VMDIR10.DIRM.HELP e
access 19d f
vmfcopy * * e = = f (prodid 5VMDIR10%DIRM replace olddate
```

Note: Users wishing to access DirMaint help files require the 19D disk.

c In order to obtain DirMaint American English help, either of the following must be issued:

- DIRM HELP
- HELP DVHAMENG

d Re-build the CMS HELP logical saved segment, to include DirMaint's help files from the AMENG Help (MAINT's 19D) disk. See the 'Placing (Serviced) Components into Production' section of the *z/VM: Service Guide* for detailed information about how these segments should be

saved on your system. (Note that you will need to use **(all** instead of **(serviced** on the VMSES/E VMFBLD command when re-building any segments.)

4 If the Uppercase English help files have been installed, place the files into production from 5VMDIR10's 502 disk to MAINT's 402 disk

a If installing using minidisks

```
link 5VMDIR10 502 addr rr          addr is any free disk address on the MAINT user
access addr e                      ID
access 402 f
vmfcopy * * e = = f (prodid 5VMDIR10%DIRM replace olddate
```

b If installing using SFS

```
access VMSYS:5VMDIR10.DIRM.HELPU e
access 402 f
vmfcopy * * e = = f (prodid 5VMDIR10%DIRM replace olddate
```

C In order to obtain DirMaint Uppercase English help, either of the following must be issued:

- DIRM HELP
- HELP DVHUCENG

7.5.3 Reinitialize the Server Machines

The server machines must be reinitialized in order for them to use the new production code.

Issue the following commands to reinitialize each DirMaint server. This must be done from a DirMaint privileged user (such as the MAINT user ID).

1 In the commands you may need to correct the system IPL to match the name of the CMS saved system,
1 or change it to IPL by device address rather than by system name. It should match the IPL statement you
1 included in the DIRMAINT machine's directory entry, or the IPL statement included in the profile used by
1 the DIRMAINT machine's directory entry.

1 **1** For the DIRMAINT server

1 **a** If not currently running

1 **xautolog dirmaint**

1 **b** If running

1 **dirm cp ipl cms parm autocr**

1 **2** DATAMOVE server and DIRMSAT server (if you use it)

1 **a** If not currently running

1 **xautolog datamove**

1 **xautolog dirmsat**

1 **b** If running

1 **dirm datamove cp ipl cms parm autocr**

1 **dirm satellite cp ipl cms parm autocr**

**You have now finished servicing z/VM Directory Maintenance
Facility Feature**

Appendix A. Local Modification Example: \$EXEC File

Note!

Notes:

1. This example provides an example for updating the DVHPXR exec part. You should substitute the file name of the part you are modifying for DVHPXR in the instructions. Since the output of the instructions is to create an EXEC file type with an abbreviation of EXC, you should substitute the abbreviation of the file type you are modifying for EXC. See chapter 7 of the *z/VM: Service Guide* for further information on local modifications.
2. If you use the automated service procedures you can use the LOCALMOD exec to put on a local modification for DirMaint. To do so, use the instructions in the Appendix titled "Apply or Rework a Local Modification" in the *z/VM: Guide for Automated Installation and Service* manual. All you will need to provide is the file name and file type of the part you want to modify.

For further information on the local modification process, refer to the "Installing Local Service" chapter of the *z/VM: Service Guide*. Some of the steps may be in a different order so you can cross reference the example against the *z/VM: Service Guide* to help with the correct order.

1 Log on to the DirMaint service user ID **5VMDIR10**

2 Establish write access to the Software Inventory Disk (MAINT 51D) if it is not already linked in write mode.

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 write access to it. **Do not use *mw* mode.**

**link maint 51d 51d m
access 51d d**

The MAINT 51D disk is where the VMSES/E system level software inventory files reside.

3 Set up the required access order

vmfsetup 5VMDIR10 {DIRM | DIRMSFS}

compname is **DIRM** if using minidisks or **DIRMSFS** if using SFS

4 Create/Edit the AUXLCL file for the part to update

Note: This step can be skipped when applying a local modification to a full part replacement part.

```
xedit dvhpxr auxlcl fmlocal (noprof fmlocal is the fm of the local modification (2C4)
====> input UPDATE1 LCL LCL0001 * comment minidisk or directory
====> file
```

5 XEDIT Source file to create the update file

Note: You do not need the XEDIT control (ctl) option when editing a full part replacement part.

```
xedit dvhpxr $exec (ctl dvhvm fmlocal is the fm of the local modification (2C4)
====> fm fmlocal minidisk or directory
```

6 Make your desired changes

7 Issue the XEDIT file command when changes are completed

```
====> file
```

8 Use EXECUPDT to generate an interpretive exec with the changes

Notes:

- a. The source parts on the 2B1 minidisk that EXECUPDT will be issued against must first be unpacked.
- b. This step can be skipped when applying a local modification to a full part replacement part.

```
copyfile dvhpxr $exec * = = (unpack oldd
execupdt dvhpxr exec * (ctl dvhvm outmode a hist sid nocomments
```

9 Copy the updated exec to the LOCALMOD disk

```
vmfrepl dvhpxr exec 5VMDIR10 DIRM = exec a ($select ftabbr cex logmod I0001 outmode localmod
erase dvhpxr * a
```

vmfrepl also updates the local service level (VVTLCL) of the software inventory and the \$SELECT file to create a record of the local modification.

10 Build the DirMaint product by issuing VMFBLD

vmfbld ppf 5VMDIR10 {DIRM | DIRMSFS} (serviced

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

Appendix B. Applying a Recommended Service Upgrade (RSU) For DirMaint

Note - z/VM Automated Service Procedure

The **preferred** method for installing service to DirMaint is to use the z/VM automated service procedure (use of the **SERVICE** and **PUT2PROD** commands).

If you have chosen to use the automated procedure to apply preventive (RSU) and CORrective service to your z/VM system, you need to follow the service instructions documented in the *z/VM: Guide for Automated Installation and Service* manual, instead of those presented here.

Note!

You should first read through the RSU hard copy memo contained with the deliverable before continuing with these instructions.

The RSU is structured to install all PTFs included on the RSU plus the files containing the preapplied service and prebuilt objects. All PTF-related files are loaded to the delta disk. The file containing the preapplied service, i.e. containing the results of VMFAPPLY, is loaded to the alternate apply disk and the contents of the files containing prebuilt objects are loaded to the appropriate build disks.

Points to consider about using the Product Service Upgrade procedure are:

- This process will not alter any of your tailored flat files (files serviced by full part replacement only such as CONFIG DATADVH) in any way. Sample files which may have been updated using update files will need to have those updates reapplied.
- Planning must be done (such as determining any disk size changes, and determining what service, if any, on your existing system is not contained on the RSU) prior to actually loading the service from the RSU. These tasks will be discussed.

The following is an overview of what tasks need to be performed during the PSU procedure:

- Prepare System

In this task, you will receive the documentation contained on the RSU and determine the DASD required to install the RSU.

- Merge Service

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

- Receive Service

The VMFINS command receives service from the RSU and places it on the Delta disk.

- Apply Additional 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. These steps are used to reapply service that was not contained on the RSU.

- Reapply Local Service (if applicable)

All local service must be entered into the software inventory to allow VMSES/E to track the changes and build them into the system.

- Build New Levels

The build tasks generates the serviced level of an object and places the new object on a 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, re-saving the DCSS (Discontiguous Saved Segments), etc.

B.1 Apply DirMaint RSU

B.1.1 Prepare Your System for Service Refresh

The *ppfname* used throughout these instructions is **5VMDIR10**, which assumes you are using the PPF supplied by IBM for DirMaint. If you have your own PPF override file for DirMaint you should use your file's *ppfname* instead of **5VMDIR10**. The *ppfname* you use should be used **throughout** the rest of this procedure.

Electronic Service (envelope file)

If you have received the RSU 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 (shipped with VMSES/E).

1 The service (RSU PTF) envelope files must have a file type of SERVLINK. Make note of the file
 1 names that you are using as you will need to enter them in place of the variable *envfilename* in the
 1 VMFINS commands the follow.

1 The documentation envelope file will be a readable flat file after DETERSE is run against it. It will not
 1 get used in the following RSU application instructions.

1 Log on to the z/VM Directory Maintenance Facility Feature service user ID 5VMDIR10

2 Establish write access to the Software Inventory Disk (MAINT 51D) if it is not already linked in write mode.

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 write access to it. **Do not use *mw* mode.**

**link maint 51d 51d m
access 51d d**

The MAINT 51D disk is where the VMSES/E system level software inventory files reside.

3 Mount the RSU tape on the tape drive as virtual device 181. You must use 181. If you have the RSU in an envelope (SERVLINK) file make sure that it is available on the A-disk or any minidisk or SFS directory accessed as C.

4 Receive the documentation:

Receive the documentation on the RSU. This step will also load the cumulative Apply Status Table (DIRM SRVAPPS) which identifies all preapplied service contained on the RSU. These files are loaded to the 51D disk.

a If receiving the RSU from tape

vmfins install info (nomemo

b If receiving the RSU from an envelope file

1 **vmfins install info (nomemo env *envfilename***

1

1

envfilename is the file name of service (RSU PTF) envelope file (SERVLINK) that represents volume 1 of the RSU.

5 Determine DASD sizes for disks to receive service:

In order to receive the service from the RSU, you need to have adequate space available on the alternate APPLY, DELTA, and BUILD disks. The required sizes are identified in the DirMaint documentation (5VMDIR10 MEMO D) received in the previous step.

6 Setup the correct minidisk access order

vmfsetup 5VMDIR10 {DIRM | DIRMSFS}

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

7 Merge the APPLY disks for DirMaint:

Next, you must prepare your system to receive the service from the RSU. To do this, you must first clear the alternate apply disk for receipt of the service from the RSU.

Enter the VMFMRDSK command to merge the alternate apply disk to the apply disk. This will clear the alternate apply disk.

vmfmrdsk 5VMDIR10 {DIRM | DIRMSFS} apply

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

8 Invoke the VMFPSU command to identify any local modifications.

vmfpsu 5VMDIR10 {DIRM | DIRMSFS}

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

This command produces an output file that contains information about the service on the RSU compared against the service and local modifications on your system. The file name is **5VMDIR10 PSUPLAN**. If local modifications touch parts that have been serviced, the DVH\$PSU\$ \$SELECT file will be created or updated to force the rebuild of those parts.

B.1.2 Receive the Preapplied, Prebuilt Service

1 Refresh the DirMaint service disks by loading new service from the RSU:

a If receiving the RSU from tape

vmfins install ppf 5VMDIR10 {DIRM | DIRMSFS} (nomemo nolink

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

b If receiving the RSU from an envelope file

1 vmfins install ppf 5VMDIR10 {DIRM | DIRMSFS} (nomemo nolink env *envfilename*

1
1
1
1

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

If you have more than one envelope for the RSU then you need to enter the file name of volume 1 of the RSU. You will be prompted for the others when needed.

```
VMFINS2767I Reading VMFINS DEFAULTS B for additional options
VMFINS2760I VMFINS processing started
VMFINS2601R Do you want to create an override for :PPF 5VMDIR10 DIRM :PRODID
5VMDIR10%DIRM?
Enter 0 (No), 1 (Yes) or 2 (Exit)
0
```

2 Check the install message log (\$VMFINS \$MSGLOG) for warning and error messages. If necessary, correct any problems before going on. For information about handling specific install messages, see the applicable *z/VM: System Messages and Codes* or use online HELP.

vmfview install

B.1.3 Process Additional Service

1 Apply additional service:

The VMFAPPLY command is used to reapply service that was not contained on the RSU just installed for the component.

Applying service with preapplied, prebuilt service will reapply any reach-ahead service that may be on the system **or** indicate that there are no reach-ahead PTFs to be applied.

vmfapply ppf 5VMDIR10 {DIRM | DIRMSFS}

Use **DIRM** for installing on minidisks or **DIRMSFS** for installing on SFS.

Messages VMFAPP2122E and VMFAPP2109R will be displayed only if you have reach-ahead service that needs to be reapplied.

VMFAPP2122E THE SET OF PTFs IN THE APPLY STATUS TABLE (5VMDIR10 SRVAPPS) ON THE 2A2 (G) DISK IS NOT A SUBSET OF THE PTFs IN THE HIGHEST LEVEL APPLY STATUS TABLE ON THE 2A6 (F) DISK. THIS IS AN INCONSISTENT STATE
VMFAPP2109R VMFAPPLY WILL AUTOMATICALLY CORRECT THE PROBLEM IDENTIFIED BY MESSAGE 2122E BY INCLUDING THE MISSING PTFs IN THE CURRENT APPLY LIST. ENTER (1) TO CONTINUE; (0) TO QUIT.

1

If you receive these messages, enter **1** for VMFAPPLY to reapply the reach-ahead service.

- 2** Check the apply message log (\$VMFAPP \$MSGLOG) for warning and error messages. If necessary, correct any problems before going on. For information about handling specific apply messages, see the applicable *z/VM: System Messages and Codes* or use online HELP.

vmfview apply

- 3** If necessary, rework local service

The **5VMDIR10 PSUPLAN** (output from running the VMFPSU command in a previous step), can be used to indicate what local service or modifications are affected by the RSU. If a PTF is applied and it contains service to a part for which you have a local modification, you will need to rework the local modification. Refer to the *z/VM Service Guide*.

B.1.3.1 Build the New Service Level

The last task is to rebuild all objects that were affected by reach-ahead service that was reapplied, local modifications, and saved segments. Choose one of the following sections to proceed with based on whether there is any reach ahead service or local modifications to be reapplied.

- If there is reach-ahead service or a local modification that needs to be reapplied, continue with step 7.2.4, "Update the Build Status Table" on page 35.
- If there is no reach ahead service (the VMFAPPLY step indicated no additional PTF's have been applied) or local modifications to be reapplied, then all objects or parts have been built and received to the test build disks during the receive of the RSU. Installation of the RSU is complete. It is not necessary to do the build step since there will not be any objects or parts flagged to be built. Continue with step 7.3, "Optional Service Steps (depending on what was installed)" on page 39.

Appendix C. Creating a 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 DirMaint files reside.

Note: Do **not** modify the product supplied 5VMDIR10 \$PPF or 5VMDIR10 PPF files to change the VMSYS file pool name or any other installation parameters. If the 5VMDIR10 \$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. This should be done after the install planning step, do not reissue that step.

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

- 1** Log on to the DirMaint service user ID **5VMDIR10**
- 2** Establish write access to the Software Inventory Disk (MAINT 51D) if it is not already linked in write mode.

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 write access to it. **Do not use *mw* mode.**

**link maint 51d 51d m
access 51d d**

The MAINT 51D disk is where the VMSES/E system level software inventory files reside.

- 3** Create a new \$PPF override file, or edit the override file created via the 'Make Override Panel' function.

xedit overname \$PPF fm2

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

fm2 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).

- 4** Create the override list by inserting the following:
:OVERLST. DIRMSFS DIRMUSFS
- 5** Create (or modify as required) the Variable Declarations (:DCL.) section for each override used when installing and servicing DirMaint. DIRMSFS is used to install and service DirMaint, a sample :DCL. section is shown in step 5a. DIRMUSFS is used to service DirMaint Uppercase English help files, a sample :DCL. section is shown in step 5b on page 55.
 - a.** Create (or modify as required) the Variable Declarations (:DCL.) section for the DIRMSFS override area, so that it resembles the :DCL. section shown below.

```

:DIRMSFS. DIRMSFS 5VMDIR10
:DCL. UPDATE
&INST191 DIR MYPPOOL1:5VMDIR10
&BASEZ DIR MYPPOOL1:5VMDIR10.DIRM.OBJECT
&BAS1Z DIR MYPPOOL1:5VMDIR10.DIRM.SOURCE
&LMODZ DIR MYPPOOL1:5VMDIR10.DIRM.LOCALMOD
&SAMPZ DIR MYPPOOL1:5VMDIR10.DIRM.SAMPLE
&DELTZ DIR MYPPOOL1:5VMDIR10.DIRM.DELTA
&APPLX DIR MYPPOOL1:5VMDIR10.DIRM.APPLYALT
&APPLY DIR MYPPOOL1:5VMDIR10.DIRM.APPLYPROD
&BLD0Z DIR MYPPOOL1:5VMDIR10.DIRM.MAINT19E
&BLD6Z DIR MYPPOOL1:5VMDIR10.DIRM.HELP
:EDCL.
:END.

```

(This override will update the :DCL. section of the DIRMSFS override area of the 5VMDIR10 \$PPF file.)

- b. Create (or modify as required) the Variable Declarations (:DCL.) section for the DIRMUSFS override area, so that it resembles the :DCL. section shown below.

```

:DIRMUSFS. DIRMUSFS 5VMDIR10
:DCL. UPDATE
&INST191 DIR MYPPOOL1:5VMDIR10
&BASEZ DIR MYPPOOL1:5VMDIR10.DIRM.OBJECT
&BAS1Z DIR MYPPOOL1:5VMDIR10.DIRM.SOURCE
&LMODZ DIR MYPPOOL1:5VMDIR10.DIRM.LOCALMOD
&SAMPZ DIR MYPPOOL1:5VMDIR10.DIRM.SAMPLE
&DELTZ DIR MYPPOOL1:5VMDIR10.DIRM.DELTA
&APPLX DIR MYPPOOL1:5VMDIR10.DIRM.APPLYALT
&APPLY DIR MYPPOOL1:5VMDIR10.DIRM.APPLYPROD
&BLD0Z DIR MYPPOOL1:5VMDIR10.DIRM.MAINT19E
&BLD6Z DIR MYPPOOL1:5VMDIR10.DIRM.HELPU
:EDCL.
:END.

```

(This override will update the :DCL. section of the DIRMUSFS override area of the 5VMDIR10 \$PPF file.)

- 6** If your \$PPF override file was created at file mode A, copy it to file mode D—the Software Inventory minidisk (MAINT 51D).

file

copyfile *overname* \$PPF *fm* = = d (olddate)

erase *overname* \$PPF *fm*

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

vmfppf *overname compname*

where *overname* is the file name of your \$PPF override file, and *compname* is **DIRMSFS**, and **DIRMUSFS**. Each override created in step 4 on page 54 must be compiled.

Note: Make sure the created *overname* PPF file is on the D (51D) minidisk, not the A minidisk.

8 Update the IPL directory control statement in the 5VMDIR10 directory entry:

```
IPL CMS PARM FILEPOOL MYP00L1
```

This will cause CMS to access the 5VMDIR10's top directory as file mode A using the MYPOOL1 file pool name instead of VMSYS.

Now that the *overname* PPF file has been created, you should specify *overname* instead of 5VMDIR10 as the PPF name to be used for those VMSES/E commands that require a PPF name.

Appendix D. Disabling DirMaint

If you had previously licensed and enabled DirMaint FL510 for use, and no longer are licensed for DirMaint, you need to explicitly disable it. Perform the following steps to disable DirMaint.

- 1** Log on to the **MAINT** user ID.
- 2** Retrieve a copy of your current DirMaint user ID directory along with passwords, using the following DirMaint commands. The file USER WITHPASS will be sent to your virtual card reader (you will want to take appropriate security precautions with this file as it contains passwords). You can read in this file using the CMS RECEIVE command and name it whatever you want. This should now be used as your CP user directory.

dirm disable
dirm user withpass

- 3** You should log off all of the DirMaint server machines; DIRMAINT DATAMOVE and DIRMSTAT.
- 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 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.

- 5** Set DirMaint to the disabled state.

service dirm disable

This command will perform the following:

- Set DirMaint as DISABLED in VMSES/E and within CP.
- Update the CP system configuration file (SYSTEM CONFIG) on the CP primary (default CF1) parm disk.

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