



**Program Directory for
Data Interfile Transfer, Testing,
and Operations Utility / ESA
(DITTO/ESA for VM)**

Release 3.0

Program Number 5654-029

for Use with
VM/ESA Version 2 Release 2.0, or later

Document Date: June 1999

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Note

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

This program directory, dated June 1999, applies to Data Interfile Transfer, Testing, and Operations Utility / ESA (DITTO/ESA for VM) Release 3.0, Program Number 5654-029.

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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 DITTO/ESA for VM Release 3. 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 3 identifies the basic and optional program materials and documentation for DITTO/ESA for VM Release 3.
- 3.0, "Program Support" on page 6 describes the IBM support available for DITTO/ESA for VM Release 3.
- 4.0, "Program and Service Level Information" on page 7 lists the APARs (program level) and PTFs (service level) incorporated into DITTO/ESA for VM Release 3.
- 5.0, "Installation Requirements and Considerations" on page 8 identifies the resources and considerations for installing and using DITTO/ESA for VM Release 3.
- 6.0, "Installation Instructions" on page 11 provides detailed installation instructions for DITTO/ESA for VM Release 3.
- 7.0, "Service Instructions" on page 24 provides detailed servicing instructions for DITTO/ESA for VM Release 3.

Before installing DITTO/ESA for VM Release 3, read 3.1, "Preventive Service Planning" on page 6. This section tells you how to find any updates to the information and procedures in this program directory.

1.1 Program Description

Data Interfile Transfer, Testing, and Operations Utility / ESA (DITTO/ESA for VM) is IBM's best known storage media and data maintenance utility solution for the VM environment. DITTO/ESA FOR VM is a key resource for data processing professionals due to many versatile functions working with tapes, disks, VTOCs and catalogs, VSAM data, sequential data sets and files, and card images.

It provides a consistent package of functions for the VM user with a common user interface based on Common User Access (CUA) architecture guidelines. It requires a VM/ESA operating system environment, an ESA capable processor, and an ESA mode virtual machine.

DITTO/ESA FOR VM's functions can be used in full-screen interactive mode using its own panel driver. For routine tasks, DITTO/ESA FOR VM can be invoked with a batch control file, or from within an REXX procedure using the new keyword command mode.

DITTO/ESA FOR VM supports and exploits new features of the VM/ESA operating systems. It adds new functions and many improvements based on several customer requirements. DITTO/ESA FOR VM uses 31-bit addressing.

This new Release 3 incorporates enhancements and maintenance, and supersedes DITTO/ESA FOR VM Release 2 as well as previous DITTO releases.

2.0 Program Materials

An IBM program is identified by a program number. The program number for Data Interfile Transfer, Testing, and Operations Utility / ESA (DITTO/ESA for VM) is 5654-029.

The program announcement material describes the features supported by DITTO/ESA for VM Release 3. 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 9-track magnetic tape (written at 6250 BPI), 3480 tape cartridge, or 4mm DAT cartridge. The tape or 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
5871	6250 tape	1	DITTO/ESA VM BASE	DITTO/ESA FOR VM
5872	3480 cart.	1	DITTO/ESA VM BASE	DITTO/ESA FOR VM
5080	4mm DAT cart.	1	DITTO/ESA VM BASE	DITTO/ESA FOR VM

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
5	Service Apply Lists

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

Tape File	Content
6	PTFPARTs
7	DITTO/ESA for VM Release 3 Service
8	DITTO/ESA for VM Release 3 Service
9	DITTO/ESA for VM Release 3 Base Code
10	DITTO/ESA for VM Release 3 Customization Files
11	DITTO/ESA for VM Release 3 Executable Code

2.2 Optional Machine-Readable Material

There are no optional machine-readable materials for DITTO/ESA for VM Release 3.

2.3 Program Publications

The following sections identify the basic and optional publications for DITTO/ESA for VM Release 3.

2.3.1 Basic Program Publications

One copy of each of the following publications is included when you order the basic materials for DITTO/ESA for VM Release 3. For additional copies, contact your IBM representative.

Figure 3. Basic Material: Unlicensed Publications

Publication Title	Form Number
<i>DITTO/ESA Installation and Customization Guide</i>	GC26-9598
<i>DITTO/ESA Release 3 Licensed Program Specifications</i>	GH19-8223
<i>Introducing DITTO/ESA Release 3</i>	GH19-8222
<i>DITTO/ESA Release 3 User's Guide and Reference</i>	SH19-8221
<i>DITTO/ESA Release 3 Reference Summary</i>	SX11-6110

2.4 Microfiche Support

There is no microfiche for DITTO/ESA for VM Release 3.

2.5 Publications Useful During Installation

The publications listed in Figure 4 or Figure 5 on page 5, depending on your VM/ESA release, may be useful during the installation of DITTO/ESA for VM Release 3. To order copies, contact your IBM representative.

Figure 4. Publications Useful During Installation / Service on VM/ESA Version 2.2.0

Publication Title	Form Number
<i>VM/ESA: VMSES/E Introduction and Reference</i>	SC24-5747
<i>VM/ESA: Service Guide</i>	SC24-5749
<i>VM/ESA: Planning and Administration</i>	SC24-5750
<i>VM/ESA: CMS Command Reference</i>	SC24-5776
<i>VM/ESA: CMS File Pool Planning, Administration, and Operation</i>	SC24-5751
<i>VM/ESA: System Messages and Codes</i>	SC24-5784

Figure 5. Publications Useful During Installation / Service on VM/ESA Version 2.3.0

Publication Title	Form Number
<i>VM/ESA: VMSES/E Introduction and Reference</i>	GC24-5837
<i>VM/ESA: Service Guide</i>	GC24-5838
<i>VM/ESA: Planning and Administration</i>	SC24-5750
<i>VM/ESA: CMS Command Reference</i>	SC24-5776
<i>VM/ESA: CMS File Pool Planning, Administration, and Operation</i>	SC24-5751
<i>VM/ESA: System Messages and Codes</i>	GC24-5841

3.0 Program Support

This section describes the IBM support available for DITTO/ESA for VM Release 3.

3.1 Preventive Service Planning

Before installing DITTO/ESA for VM Release 3, 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 6. PSP Upgrade and Subset ID

Retain			
COMPID	Release	Upgrade	Subset
565402901	310	DITTOESA	VM/130

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 7 identifies the component ID (COMPID), Retain Release and Field Engineering Service Number (FESN) for DITTO/ESA for VM Release 3.

Figure 7. Component IDs

Retain			
COMPID	Release	Component Name	FESN
565402901	310	DITTO/ESA VM BASE	0401544

4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of DITTO/ESA for VM Release 3. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs shipped with this product. Information about the cumulative service tape is also provided.

4.1 Program Level Information

The following APAR fixes have been incorporated into DITTO/ESA for VM Release 3:

PN92553	PQ06562	PQ08843	PQ19084
PQ00346	PQ06566	PQ08851	PQ19086
PQ01389	PQ08601	PQ11316	PQ25389
PQ02341	PQ08829	PQ16830	PQ25477

4.2 Service Level Information

The following PTFs have been incorporated into DITTO/ESA for VM Release 3:

UQ01313	UQ07390	UQ12433	UQ21168
UQ03521	UQ09843	UQ12566	UQ29058

4.3 Cumulative Service Tape

Cumulative service for DITTO/ESA for VM Release 3 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 DITTO/ESA for VM Release 3.

5.1 Hardware Requirements

There are no special hardware requirements for DITTO/ESA for VM Release 3.

5.2 Program Considerations

The following sections list the programming considerations for installing DITTO/ESA for VM Release 3 and activating its functions.

5.2.1 Operating System Requirements

DITTO/ESA for VM Release 3 supports the following VM operating systems:

- VM/ESA Version 2 Release 2.0, or later
- **RSU9702 service level** or above must be applied to VMSES/E on VM/ESA 2.2.0 prior to installing DITTO/ESA for VM Release 3

5.2.2 Other Program Product Requirements

No other products are required for DITTO/ESA for VM Release 3.

5.2.3 Program Installation and Service Considerations

This section describes items that should be considered before you install or service DITTO/ESA for VM Release 3.

- 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 DITTO/ESA for VM Release 3 strictly using the MAINT user ID, but will use a new user ID--5654029D. 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 change during the installation procedure 6.2, “Plan Your Installation For DITTO/ESA for VM Release 3” step 6 on page 13, rather than after you have installed this product.

5.3 DASD Storage and User ID Requirements

Figure 8 lists the user IDs, minidisks and default SFS directory names that are used to install and service DITTO/ESA for VM Release 3.

Important Installation Notes:

- User ID(s) and minidisks or SFS directories will be defined in 6.2, “Plan Your Installation For DITTO/ESA for VM Release 3” 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.
- 5654029D 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 DITTO/ESA for VM Release 3” step 6 on page 13.
- If you choose to install DITTO/ESA for VM Release 3 on a common user ID the default minidisk addresses for DITTO/ESA for VM Release 3 may already be defined. If any of the default minidisks required by DITTO/ESA for VM Release 3 are already in use you will have to create an override to change the default minidisks for DITTO/ESA for VM Release 3 so they are unique.

Figure 8 (Page 1 of 2). DASD Storage Requirements for Target Minidisks

Minidisk owner (user ID)	Default Address	Storage in Cylinders		FB-512 Blocks	SFS 4K Blocks	Usage
		DASD	CYLS			Default SFS Directory Name
5654029D	2B2	3390 3380 9345	18 20 20	25920	3240	Contains all the base code shipped with DITTO/ESA for VM Release 3 VMSYS:5654029D.DITTOSFS.OBJECT
5654029D	2C2	3390 3380 9345	2 2 2	2880	360	Contains customization files. This disk may also be used for local modifications. VMSYS:5654029D.DITTOSFS.SAMPLE
5654029D	2D2	3390 3380 9345	13 15 15	18720	2340	Contains serviced files VMSYS:5654029D.DITTOSFS.DELTA
5654029D	2A6	3390 3380 9345	2 2 2	2880	360	Contains AUX files and software inventory tables that represent the test service level of DITTO/ESA for VM Release 3 VMSYS:5654029D.DITTOSFS.APPLYALT

Note: Cylinder values defined in this table are based on a 4K block size. FB-512 block and SFS values are derived from the 3390 cylinder values in this table. The FBA blocks are listed as 1/2K but should be CMS formatted at 1K size. 13680 4K blocks are needed for SFS install.

Figure 8 (Page 2 of 2). DASD Storage Requirements for Target Minidisks

Minidisk owner (user ID)	Default Address	Storage in Cylinders		FB-512 Blocks	SFS 4K Blocks	Usage
		DASD	CYLS			Default SFS Directory Name
5654029D	2A2	3390 3380 9345	2 2 2	2880	360	Contains AUX files and software inventory tables that represent the service level of DITTO/ESA for VM Release 3 that is currently in production. VMSYS:5654029D.DITTOSFS.APPLYPROD
5654029D	400	3390 3380 9345	13 15 15	18720	2340	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:5654029D.DITTOSFS.TPRODUCT
5654029D	401	3390 3380 9345	13 15 15	18720	2340	Production build disk. VMSYS:5654029D.DITTOSFS.PRODUCT
5654029D	191	3390 3380 9345	13 15 15	18720	2340	5654029D user ID's 191 minidisk VMSYS:5654029D.
<p>Note: Cylinder values defined in this table are based on a 4K block size. FB-512 block and SFS values are derived from the 3390 cylinder values in this table. The FBA blocks are listed as 1/2K but should be CMS formatted at 1K size. 13680 4K blocks are needed for SFS install.</p>						

6.0 Installation Instructions

This chapter describes the installation methods and the step-by-step procedures to install and activate DITTO/ESA for VM Release 3.

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 *VM/ESA Installation Guide*.

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 DITTO/ESA for VM Release 3, adapt these instructions as needed for your environment.

Note

The sample console output presented throughout these instructions was produced on a VM/ESA 2.2.0 system. If you're installing DITTO/ESA for VM Release 3 on a different VM/ESA 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 DITTO/ESA for VM Release 3 using VMSES/E.

- Plan Your Installation

Use the VMFINS command to load several VMSES/E files from the product tape and to obtain DITTO/ESA for VM Release 3 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 DITTO/ESA for VM Release 3.

- Install the DITTO/ESA for VM Release 3 Product

Use the VMFINS command to load the DITTO/ESA for VM Release 3 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.

- Perform Post-installation Tasks

Information about file tailoring and initial activation of the program is presented in 6.5, "Post-Installation Customization (optional)" on page 21.

- Place DITTO/ESA for VM Release 3 Files into Production

Once the product files have been tailored and the operation of DITTO/ESA for VM Release 3 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 DITTO/ESA for VM Release 3

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 DITTO/ESA for VM Release 3 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 DITTO/ESA for VM Release 3 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.

- 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 DITTO/ESA for VM Release 3 product control files to the 51D minidisk.

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.

```
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 DITTO/ESA for VM Release 3.

Notes:

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

vmfins install ppf 5654029d {ditto | dittosfs} (plan nomemo)

Use **ditto** for installing on minidisks or **dittofs** for installing in Shared File System directories.

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

Notes:

- a. 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 DITTO/ESA for VM Release 3. For example, you will need to specify your PPF override file name instead of 5654029D for certain VMSES/E commands.
- b. 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.
- c. For more information about changing the VMSYS file pool name, refer to Chapter 3 in the *VMSES/E Introduction and Reference*.

```
VMFINS2767I Reading VMFINS DEFAULTS B for additional options
VMFINS2760I VMFINS processing started
VMFINS2601R Do you want to create an override for :PPF 5654029D DITTO :PRODID
5654029D%DITTO?
Enter 0 (No), 1 (Yes) or 2 (Exit)
0
VMFINS2603I Processing product :PPF 5654029D DITTO :PRODID 5654029D%DITTO
VMFREQ2805I Product :PPF 5654029D DITTO :PRODID 5654029D%DITTO has passed
requisite checking
VMFINT2603I Planning for the installation of product :PPF 5654029D DITTO :PRODID
5654029D%DITTO
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 going on. For information about handling specific error messages, see *VM/ESA: System Messages and Codes*, or use on-line HELP.

vmfview install

6.3 Allocate Resources for Installing DITTO/ESA for VM Release 3

Use the planning information in the 5654029D PLANINFO file, created in the **PLAN** step, to:

- Create the 5654029D user directory for minidisk install

OR

- Create the 5654029D user directory for SFS install

6.3.1 Installing DITTO/ESA for VM Release 3 on Minidisk

- 1 Obtain the user directory from the 5654029D 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 5654029D 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 5654029D. Use Figure 8 on page 9 to obtain the minidisk requirements.
- 3 Add the 5654029D directory entry to the system directory. Change the password for 5654029D 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 5654029D user ID must be formatted before installing DITTO/ESA for VM Release 3.

6.3.2 Installing DITTO/ESA for VM Release 3 in SFS Directories

- 1 Obtain the user directory from the 5654029D 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 5654029D user ID. Use the directory entry found in PLANINFO as a model as input to your system directory.

- 2** Add the 5654029D directory entry to the system directory. Change the password for 5654029D 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 DITTO/ESA for VM Release 3 SFS directories, the 4K block requirements for the directories are summarized in Figure 8 on page 9.

This information will be used when enrolling userid 5654029D in the VMSYS filepool.
 - b** Enroll user 5654029D in the VMSYS filepool using the ENROLL USER command:

```
ENROLL USER 5654029D 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 DITTO/ESA for VM Release 3. This information can be obtained from the QUERY FILEPOOL STATUS command. Near the end of the output from this command is a list of minidisks in the filepool and the number of blocks free. If the number of blocks free is smaller than the total 4K blocks needed to install DITTO/ESA for VM Release 3 you will need to add space to the filepool. See the *VM/ESA SFS and CRR Planning, Administration, and Operation* manual for information on adding space to a filepool.
 - d** Create the necessary subdirectories listed in the 5654029D PLANINFO file using the CREATE DIRECTORY command.

set filepool vmsys:
create directory *dirid*

dirid is the name of the SFS directory you're creating. An example of the create command is:

```
create directory vmsys:5654029D.dittosfs
create directory vmsys:5654029D.dittosfs.object
:
```

If necessary, see the *VM/ESA CMS Command Reference* manual for more information about the CREATE DIRECTORY command.

A complete list of default DITTO/ESA for VM Release 3 SFS directories is provided in Figure 8 on page 9.

- e** If you intend to use an SFS directory as the work space for the 5654029D user ID, include the following IPL control statement in the 5654029D directory entry:

```
IPL CMS PARM FILEPOOL VMSYS
```

This will cause CMS to automatically access the 5654029D's top directory as file mode A.

6.4 Install DITTO/ESA for VM Release 3

The *ppfname* used throughout these installation instructions is **5654029D**, which assumes you are using the PPF supplied by IBM for DITTO/ESA for VM Release 3. If you have your own PPF override file for DITTO/ESA for VM Release 3, you should use your file's *ppfname* instead of **5654029D**. The *ppfname* you use should be used **throughout** the rest of this procedure.

- 1** Logon to the installation user ID **5654029D**.
- 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 DITTO/ESA for VM Release 3 installation tape mounted and attached to 5654029D at virtual address 181. The VMFINS EXEC requires the tape drive to be at virtual address 181.

6 Install DITTO/ESA for VM Release 3.

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 (5654029D), 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.

vmfins install ppf 5654029d {ditto | dittosfs} (nomemo nolink

Use **ditto** for installing on minidisks or **dittosfs** for installing in Shared File System directories.

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 5654029D DITTO :PRODID
5654029D%DITTO?
Enter 0 (No), 1 (Yes) or 2 (Exit)
0
VMFINS2603I Processing product :PPF 5654029D DITTO :PRODID 5654029D%DITTO
VMFREQ2805I Product :PPF 5654029D DITTO :PRODID 5654029D%DITTO has passed
requisite checking
VMFINT2603I Installing product :PPF 5654029D DITTO :PRODID 5654029D%DITTO
VMFSET2760I VMFSETUP processing started for 5654029D DITTO
VMFUTL2205I Minidisk|Directory Assignments::
String Mode Stat Vdev Label/Directory
VMFUTL2205I LOCALSAM E R/W 2C2 DSK2C2
VMFUTL2205I APPLY F R/W 2A6 DSK2A6
VMFUTL2205I G R/W 2A2 DSK2A2
VMFUTL2205I DELTA H R/W 2D2 DSK2D2
VMFUTL2205I BUILD0 I R/W 400 DSK400
VMFUTL2205I BUILD1 J R/W 401 DSK401
VMFUTL2205I BASE K R/W 2B2 DSK2B2
VMFUTL2205I ----- A R/W 191 DSK191
VMFUTL2205I ----- B R/O 5E5 MNT5E5
VMFUTL2205I ----- D R/W 51D DSK51D
VMFUTL2205I ----- S R/O 190 MNT190
VMFUTL2205I ----- Y/S R/O 19E MNT19E
VMFSET2760I VMFSETUP processing completed successfully
VMFREC2760I VMFREC processing started
VMFREC1852I Volume 1 of 1 of INS TAPE 9900
VMFREC1851I (1 of 7) VMFRCAXL processing AXLIST
VMFRCX2159I Loading 0 part(s) to DELTA 2D2 (H)
VMFREC1851I (2 of 7) VMFRCPTF processing PARTLST
VMFRCPP2159I Loading 0 part(s) to DELTA 2D2 (H)
VMFREC1851I (3 of 7) VMFRCCOM processing DELTA
VMFRCC2159I Loading 0 part(s) to DELTA 2D2 (H)
VMFREC1851I (4 of 7) VMFRCALL processing APPLY
VMFRCA2159I Loading part(s) to APPLY 2A6 (F)
VMFRCA2159I Loaded 1 part(s) to APPLY 2A6 (F)
VMFREC1851I (5 of 7) VMFRCALL processing BASE
VMFRCA2159I Loading part(s) to BASE 2B2 (K)
VMFRCA2159I Loaded 853 part(s) to BASE 2B2 (K)
VMFREC1851I (6 of 7) VMFRCALL processing SAMPLE
VMFRCA2159I Loading part(s) to LOCALSAM 2C2 (E)
VMFRCA2159I Loaded 12 part(s) to LOCALSAM 2C2 (E)
VMFREC1851I (7 of 7) VMFRCALL processing BUILD
VMFRCA2159I Loading part(s) to BUILD0 400 (I)
VMFRCA2159I Loaded 26 part(s) to BUILD0 400 (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 going on. For information about handling specific error messages, see *VM/ESA: System Messages and Codes*, or use on-line HELP.

vmfview install

6.4.1 Update Build Status Table for DITTO/ESA for VM Release 3

- 1** Update the VM SYSBLDS software inventory file for DITTO/ESA for VM Release 3.

vmfins build ppf 5654029d {ditto | dittosfs} (serviced nolink

Use **ditto** for installing on minidisks or **dittosfs** for installing in Shared File System directories.

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 5654029D has been built.

```

vmfins build ppf 5654029d ditto (serviced nolink
VMFINS2767I Reading VMFINS DEFAULTS B for additional options
VMFINS2760I VMFINS processing started
VMFINS2603I Processing product :PPF 5654029D DITTO :PRODID 5654029D%DITTO
VMFREQ2805I Product :PPF 5654029D DITTO :PRODID 5654029D%DITTO has passed
requisite checking
VMFINB2603I Building product :PPF 5654029D DITTO :PRODID 5654029D%DITTO
VMFSET2760I VMFSETUP processing started for 5654029D DITTO
VMFUTL2205I Minidisk|Directory Assignments:
String      Mode  Stat  Vdev  Label/Directory
VMFUTL2205I LOCALSAM E     R/W   2C2   DSK2C2
VMFUTL2205I APPLY   F     R/W   2A6   DSK2A6
VMFUTL2205I         G     R/W   2A2   DSK2A2
VMFUTL2205I DELTA   H     R/W   2D2   DSK2D2
VMFUTL2205I BUILD0  I     R/W   400   DSK400
VMFUTL2205I BUILD1  J     R/W   401   DSK401
VMFUTL2205I BASE    K     R/W   2B2   DSK2B2
VMFUTL2205I ----- A     R/W   191   DSK191
VMFUTL2205I ----- B     R/O   5E5   MNT5E5
VMFUTL2205I ----- D     R/W   51D   DSK51D
VMFUTL2205I ----- S     R/O   190   MNT190
VMFUTL2205I ----- Y/S   R/O   19E   MNT19E
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
VMFINB2173I No verification exec found for this product
VMFINS2760I VMFINS processing completed successfully

```

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

vmfview install

6.5 Post-Installation Customization (optional)

For all post-installation customization, refer to the *DITTO/ESA Installation and Customization Guide*.

6.6 Place DITTO/ESA for VM Release 3 Into Production

6.6.1 Copy DITTO/ESA for VM Release 3 Files Into Production

- 1 Logon to MAINT if you plan to put DITTO/ESA for VM Release 3 general use code on the 'Y' disk (product code on MAINT's 19E disk). Or logon to the owner of the disk that will contain the 'production' level of the DITTO/ESA for VM Release 3 code.

a If installing using minidisks

```
link 5654029d 400 400 rr
access 400 e
```

The VMFCOPY command will update the VMSES PARTCAT file on the 401 disk.

```
link 5654029d 401 401 mr (or link maint 19e 19e mr)
```

```
access 401 f (or 19e f)
```

```
vmfcopy * * e = = f2 (prodid 5654029d%ditto olddate replace
```

Message VMFCOP2866I will be displayed; this can be ignored:

```
VMFCOP2866I VMSES PARTCAT E1 will not be copied.
It is only valid for the disk or
directory it was created on.
```

b If installing using Shared File System

```
access vmsys:5654029d.dittosfs.tproduct e
```

The VMFCOPY command will update the VMSES PARTCAT file.

```
access vmsys:5654029d.dittosfs.product f
```

```
vmfcopy * * e = = f2 (prodid 5654029d%dittosfs olddate replace
```

Message VMFCOP2866I will be displayed; this can be ignored:

```
VMFCOP2866I VMSES PARTCAT E1 will not be copied.
It is only valid for the disk or
directory it was created on.
```

- 2 Logon to MAINT if you plan to put DITTO/ESA for VM Release 3 help files on the system AMENG Help (MAINT's 19D) disk.

a If installing using minidisks

link 5654029d 400 400 rr

access 400 e

acc 19d f

vmfcopy ditto helpcms e = = f (prodid 5654029d%ditto olddate replace

The VMFCOPY command will update the VMSES PARTCAT file on the AMENG Help (MAINT 19D) disk.

b If installing using Shared File System

access vmsys:5654029d.dittosfs.tproduct e

acc 19d f

vmfcopy ditto helpcms e = = f (prodid 5654029d%dittosfs olddate replace

The VMFCOPY command will update the VMSES PARTCAT file on the AMENG Help (MAINT 19D) disk.

- 3** 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 *VM/ESA Service Guide* for detailed information about how to save the CMS saved system.
- 4** Re-build the CMS HELP logical saved segment, to include DITTO/ESA for VM Release 3's help files from the AMENG Help (MAINT's 19D) disk. See the 'Placing (Serviced) Components into Production' section of the *VM/ESA 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.)

DITTO/ESA for VM Release 3 is now installed and built on your system.

For verification and customization of the product, see the *DITTO/ESA Installation and Customization Guide*.

7.0 Service Instructions

This section of the Program Directory contains the procedure to install CORrective service to DITTO/ESA for VM Release 3. VMSES/E is used to install service for DITTO/ESA for VM Release 3.

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 if using a shared file system, change the instructions appropriately.

7.1 VMSES/E Service Process Overview

The following is a brief description of the main steps in servicing DITTO/ESA for VM Release 3 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 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 (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 *VM/ESA 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, re-saving the NSS (Named Saved System) or DCSS (Discontiguous Saved Segments), etc.

7.2 Servicing DITTO/ESA for VM Release 3

7.2.1 Prepare to Receive Service

The *ppfname* used throughout these servicing instructions is **5654029D**, which assumes you are using the PPF supplied by IBM for DITTO/ESA for VM Release 3. If you have your own PPF override file for DITTO/ESA for VM Release 3, you should use your file's *ppfname* instead of **5654029D**. The *ppfname* you use should be used **throughout** the rest of this procedure, unless otherwise stated differently.

- 1** Logon to DITTO/ESA for VM Release 3 service user ID **5654029D**
- 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, 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 DITTO/ESA for VM Release 3 CORrective service tape mounted and attached to **5654029D**.
- 4** Establish the correct minidisk access order.

vmfsetup 5654029d {ditto | dittosfs}

5654029d is the PPF that was shipped with the product. If you have your own PPF override you should substitute your PPF name for 5654029d.

Use **ditto** for installing on minidisks or **dittosfs** for installing in Shared File System directories.

- 5** Receive the documentation. VMFREC, with the INFO option, loads the documentation and displays a list of all the products on the tape.

Electronic Service

If you are receiving service from ServiceLink (electronic service) see Appendix A, 'Receiving Service for VMSES Envelopes', section Receive Service Documentation, in the *VM/ESA Service Guide*. Remember to substitute the *ppfname* and *compname* used for servicing DITTO/ESA for VM Release 3 in the instructions shown in that Appendix. Then return back to this program directory and continue with step 7 on page 26 below.

vmfrec info

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

- 6 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.

- 7 Merge previously applied service to ensure that you have a clean alternate apply disk for new service.

vmfmrdsk 5654029d {ditto | dittosfs} apply

Use **ditto** for installing on minidisks or **dittosfs** for installing in Shared File System directories.

This command clears the alternate APPLY disk.

- 8 Review the merge message log (\$VMFMRD \$MSGLOG). If necessary, correct any problems before going on. For information about handling specific error messages, see *VM/ESA: 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.

Electronic Service

If you are receiving service from Servicelink (electronic service) see Appendix A, 'Receiving Service for VMSES Envelopes', section Receive the Service, in the *VM/ESA Service Guide*. Remember to substitute the *ppfname* and *compname* used for servicing DITTO/ESA for VM Release 3 in the instructions shown in that Appendix. Then return back to this program directory and continue with section 7.2.3, "Apply the Service."

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

- 1 Receive the service.

vmfrec ppf 5654029d {ditto | dittosfs}

Use **ditto** for installing on minidisks or **dittosfs** for installing in Shared File System directories.

This command receives service from your service tape. 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 error messages, see *VM/ESA: System Messages and Codes*, or use on-line HELP.

vmfview receive

7.2.3 Apply the Service

- 1 Apply the new service.

vmfapply ppf 5654029d {ditto | dittosfs}

Use **ditto** for installing on minidisks or **dittosfs** for installing in Shared File System directories.

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.

You must review the VMFAPPLY message log if you receive a return code (RC) of a 4, as this may indicate that you have local modifications that need to be reworked.

- 2** Review the apply message log (\$VMFAPP \$MSGLOG). If necessary, correct any problems before going on. For information about handling specific error messages, see *VM/ESA: 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 DITTO/ESA for VM Release 3. Refer to chapter 7 in the *VM/ESA Service Guide*. Follow the steps that are applicable to your local modification.

The following substitutions need to be made:

- **esalcl** should be **5654029D**
- **esa** should be **5654029D**
- *compname* should be **ditto** or **dittosfs** (minidisk or SFS)
- *appid* should be **5654029D**
- *fm-local* should be the fm of 2C2
- *fm-applyalt* should be the fm of 2A6
- **outmode localmod** should be **outmode localsam**

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/ESA Service Guide*, you should return back to this program directory at 7.2.4, "Update the Build Status Table."

7.2.4 Update the Build Status Table

1 Update the Build Status Table with serviced parts.

vmfbld ppf 5654029d {ditto | dittosfs} (status

Use **ditto** for installing on minidisks or **dittosfs** for installing in Shared File System directories.

This command updates the Build Status Table.

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 5654029D \$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 5654029D \$PPF
on 191 (A) from level \$PFnnnnn

vmfppf 5654029d *

If you've created your own PPF override, then use your PPF name instead of 5654029D.

**copyfile 5654029d \$PPF a = = d (olddate replace
erase 5654029d \$PPF a**

Note: Do not use your own PPF name in place of 5654029D for the COPYFILE and ERASE commands.

vmfbld ppf 5654029d {ditto | dittosfs} (status

1

Re-issue VMFBLD to complete updating the build status table.

Use **ditto** for installing on minidisks or **dittosfs** for installing in Shared File System directories. 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 DITTO/ESA for VM Release 3 serviced parts.

vmfbld ppf 5654029d {ditto | dittosfs} (serviced

Use **ditto** for installing on minidisks or **dittosfs** for installing in Shared File System directories.

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 going on. For information about handling specific error messages, see *VM/ESA: System Messages and Codes*, or use on-line HELP.

vmfview build

7.3 Place the New DITTO/ESA for VM Release 3 Service Into Production

7.3.1 Copy the New DITTO/ESA for VM Release 3 Serviced Files Into Production

- 1 Logon to MAINT if you plan to put DITTO/ESA for VM Release 3 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 DITTO/ESA for VM Release 3 code.
 - a If installing using minidisks

link 5654029d 400 400 rr
access 400 e
link 5654029d 401 401 rr (or link maint 19e 19e mr)
access 401 f (or 19e f)
vmfcopy * * e = = f2 (prodid 5654029d%ditto olddate replace

The VMFCOPY command will update the VMSES PARTCAT file on the 401 disk.

b If installing using Shared File System

access vmsys:5654029d.dittosfs.tproduct e
access vmsys:5654029d.dittosfs.product f
vmfcopy * * e = = f2 (prodid 5654029d%dittosfs olddate replace

The VMFCOPY command will update the VMSES PARTCAT file on the production disk.

Message VMFCOP2866I will be displayed; this can be ignored:

VMFCOP2866I VMSES PARTCAT E1 will not be copied.
It is only valid for the disk or directory it was created on.

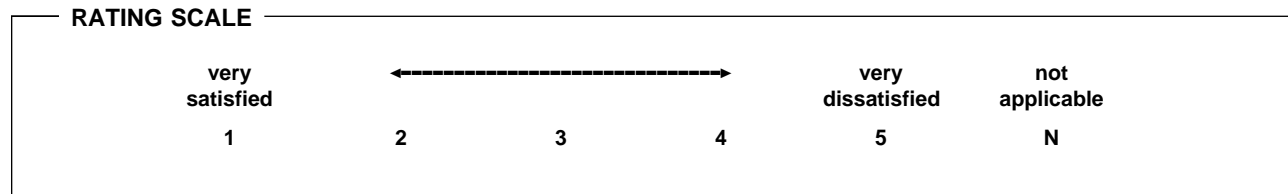
You have finished servicing DITTO/ESA for VM Release 3.

Reader's Comments

Data Interfile Transfer, Testing, and Operations Utility / ESA (DITTO/ESA for VM) Release 3.0

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

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



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

- Did you order this product as an independent product or as part of a package?

- Independent
- Package

What type of package was ordered?

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

- Is this the first time your organization has installed this product?
 - Yes
 - No
- Were the people who did the installation experienced with the installation of VM products using VMSES/E?
 - Yes
 - How many years of experience do they have? _____
 - No
- How long did it take to install this product? _____
- If you have any comments to make about your ratings above, or any other aspect of the product installation, please list them below:

Please provide the following contact information:

 Name and Job Title

 Organization

 Address

 Telephone

Thank you for your participation.

Please send the completed form to the following address, or give to your IBM representative who will forward it to the Data Interfile Transfer, Testing, and Operations Utility / ESA (DITTO/ESA for VM) Development group:

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