



**Program Directory for
Realtime Monitor VM/ESA**

Release 5.3

Program Number 5798-DWD

for Use with
z/VM Version 3

Document Date: February 2001

GI10-4706-00

Note

Before using this information and the product it supports, be sure to read the general information under "Notices" on page 45.

This program directory, dated February 2001, applies to Realtime Monitor VM/ESA Release 5.3 (RTM VM/ESA), Program Number 5798-DWD.

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Summary of Changes

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

- The first suffix level is February 2001.

RTM Web Information

The RTM web page can be visited at URL <http://www.ibm.com/s390/vm/related/rtm> where you will find:

- Additional useful information, hints, and tips.
- A postscript version of the RTM 1.5.3 program directory available for downloading.
- A PDF version of the RTM 1.5.3 program directory available for viewing.
- Additional IBM VM performance resources.

Plan on visiting this URL often.

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 RTM. 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 RTM.
- 3.0, “Program Support” on page 6 describes the IBM support available for RTM.
- 4.0, “Program and Service Level Information” on page 7 lists the APARs (program level) and PTFs (service level) incorporated into RTM.
- 5.0, “Installation Requirements and Considerations” on page 8 identifies the resources and considerations for installing and using RTM.
- 6.0, “Installation Instructions” on page 11 provides detailed installation instructions for RTM.
- 7.0, “Service Instructions” on page 29 provides detailed servicing instructions for RTM.
- Appendix A, “Local Modification Example: Assemble File” on page 39 provides a local modification example for RTM.
- Appendix B, “Create Product Parameter File (PPF) Override” on page 42 provides detailed information on overriding the Product Parameter File (PPF).

Before installing RTM, 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

RTM was designed as a realtime monitor and diagnostic tool for monitoring, analysis and problem solving z/VM Version 3 systems. It is also recommended that RTM be used for installations of hardware and software to assist in validating the system components and establishing requirements for additional hardware or software.

1.2 Enhancements for Realtime Monitor VM/ESA

The following enhancements have been made to RTM:

- Performance monitoring of z/VM Version 3 including 64-bit architecture support.
- Improved initialization control with the availability of an external configuration file which can be used to:
 - Establish table sizes, reducing the need for local modifications and recompiles.

- Provide an initial interface for specific commands, eliminating the need for RTMINIT processing. The following commands are supported within the RTM configuration file:

BENCHMRK
INTERVAL
ORDER
SET

- Query command improvements to obtain:
 - The service level of executable RTM parts using the new LEVEL operand
 - Storage addresses of dynamically allocated tables using the new TABLES operand
 - System information, such as the CP and CMS levels, hardware level, and installed features using the new ENVIRON operand.
- Addressability for storage above 16MB
- Elimination of the 370 accommodation requirement

2.0 Program Materials

An IBM program is identified by a program number. The program number for Realtime Monitor VM/ESA is 5798-DWD.

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

The following sections identify:

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

2.1 Basic Machine-Readable Material

The distribution medium for this program is 3480 tape cartridge, or 4MM tape 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
5802	3480 cart.	1	RTM 1.5.3	RTM/ESA 153 BASE
6277	4MM-DAT cart.	1	RTM 1.5.3	RTM/ESA 153 BASE

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
6	PTFPARTs
7	RTM Service
8	RTM Service

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

Tape File	Content
9	RTM Base and Source Code
10	RTM RTM Maclib
11	RTM Sample Customization Files

2.2 Optional Machine-Readable Material

There are no optional machine-readable materials for RTM.

2.3 Program Publications

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

2.3.1 Softcopy Publications

The RTM publication:

VM/ESA RTM R5 Program Description/Operations, SH26-7000-09,

is offered in displayable softcopy form on CD-ROM. This publication is shipped on the *IBM Online Library Omnibus Edition VM Collection* (SK2T-2067) CD-ROM. One copy of the VM collection kit CD-ROM is included when you order the basic materials for RTM.

Displayable manuals can be used with the BookManager® READ licensed programs in any of the supported environments. Terms and conditions for use of the machine-readable files are shipped with the Online Product Library.

2.3.2 Basic Program Publications

One copy of the following is included when you order the basic materials for RTM. For additional copies, contact your IBM representative.

Figure 3. Basic Material: Unlicensed Publications

Publication Title	Form Number
<i>IBM Online Library Omnibus Edition VM Collection</i>	SK2T-2067-16

Note:

- In countries outside the United States, the form number for ordering the *IBM Online Library Omnibus Edition VM Collection* may be 5636-PUB.
- The *VM/ESA RTM R5 Program Description/Operations*, SH26-7000-09, manual is only available on the *IBM Online Library Omnibus Edition VM Collection*.

2.4 Microfiche Support

There is no microfiche for RTM.

2.5 Publications Useful During Installation

The publications listed in Figure 4 may be useful during the installation of RTM. To order copies, contact your IBM representative.

Figure 4. Publications Useful During Installation / Service on z/VM Version 3

Publication Title	Form Number
<i>z/VM: VMSES/E Introduction and Reference</i>	GC24-5947
<i>z/VM: Service Guide</i>	GC24-5946
<i>z/VM: Planning and Administration</i>	SC24-5948
<i>z/VM: CP Command and Utility Reference</i>	SC24-5967
<i>z/VM: CMS Command Reference</i>	SC24-5969
<i>z/VM: CMS File Pool Planning, Administration, and Operation</i>	SC24-5949
<i>z/VM: System Messages and Codes</i>	GC24-5974
<i>z/VM: Performance</i>	SC24-5952

3.0 Program Support

This section describes the IBM support available for RTM.

3.1 Preventive Service Planning

Before installing RTM, 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 5. PSP Upgrade and Subset ID

Retain			
COMPID	Release	Upgrade	Subset
5798DWD00	153	VMRTMESA153	RTMESA/153

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 6 identifies the component ID (COMPID), Retain Release and Field Engineering Service Number (FESN) for RTM.

Figure 6. Component IDs

Retain			
COMPID	Release	Component Name	FESN
5798DWD00	153	RTM 1.5.3	0991822

4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of RTM. 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 against the previous release of RTM have been incorporated into this release.

GC04949 GC04959 GC04960 GC05012 GC05016 GC05026 GC05041 GC05043
GC05044 GC05045 GC05046 GC05103 GC05109 GC05115 GC05121 GC05131
GC05143 GC05162 GC05182 GC05201 GC05219 GC05242 GC05262 GC05277
GC05288 GC05292 GC05293 GC05340 GC05354 GC05357 GC05362 GC05363
GC05365 GC05374 GC05398 GC05404 GC05405 GC05416 GC05417 GC05423
GC05425 GC05430 GC05433 GC05435 GC05445 GC05460 GC05462 GC05465

4.2 Service Level Information

Check the VMRTMESA153 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 Realtime Monitor VM/ESA web page at <http://www.ibm.com/s390/vm/related/rtm> for any additional service hints, tips, and concerns.

4.3 Cumulative Service Tape

Cumulative service for RTM Release 5.3 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 RTM.

5.1 Hardware Requirements

There are no special hardware requirements for RTM.

5.2 Program Considerations

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

5.2.1 Operating System Requirements

RTM supports the following VM operating systems:

- z/VM Version 3

5.2.2 Other Program Product Requirements

RTM **must be** assembled on the system on which it will run. It requires HLASM (5696-234) Release 4, or higher, which **must be** installed **before** installing RTM. HLASM APAR PQ42642 **must be** applied for proper assembly of RTM parts.

5.2.3 Program Installation and Service Considerations

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

- 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 RTM strictly using the MAINT user ID, but will use a new user ID--5798DWDD. This is the IBM suggested user ID name. You are free to change this to any user ID name you wish; however, a PPF override must be created.

Note: It may be easier to make the above PPF override during the installation procedure 6.2, "Plan Your Installation For RTM" step 6 on page 13, rather than after you have installed this product.

5.3 DASD Storage and User ID Requirements

Figure 7 on page 9 lists the user IDs, minidisks and default SFS directory names that are used to install and service RTM.

Important Installation Notes:

- User ID(s) and minidisks or SFS directories will be defined in 6.2, “Plan Your Installation For RTM” 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.
- 5798DWDD 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 RTM” step 6 on page 13.
- If you choose to install RTM on a common user ID the default minidisk addresses for RTM may already be defined. If any of the default minidisks required by RTM are already in use you will have to create an override to change the default minidisks for RTM so they are unique.

<i>Figure 7 (Page 1 of 2). DASD Storage Requirements for Target Minidisks</i>						
Minidisk owner (user ID)	Default Address	Storage in Cylinders		FB-512 Blocks	SFS 4K Blocks	Usage
		DASD	CYLS			Default SFS Directory Name
5798DWDD	2B2	3390 3380 9345	9 10 10	12000	1500	Contains all the base source code shipped with RTM VMSYS:5798DWDD.SOURCE
5798DWDD	2C2	3390 3380 9345	2 2 2	2400	300	Contains customization files. This disk may also be used for local modifications. VMSYS:5798DWDD.SAMPLE
5798DWDD	2D2	3390 3380 9345	9 10 10	12000	1500	Contains serviced files VMSYS:5798DWDD.DELTA
5798DWDD	2A6	3390 3380 9345	2 2 2	2400	300	Contains AUX files and software inventory tables that represent the test service level of RTM VMSYS:5798DWDD.APPLYALT
5798DWDD	2A2	3390 3380 9345	2 2 2	2400	300	Contains AUX files and software inventory tables that represent the service level of RTM that is currently in production. VMSYS:5798DWDD.APPLYPROD
<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 3380 cylinder values in this table. The FBA blocks are listed as 1/2K but should be CMS formatted at 1K size. 8400 4K blocks are needed for SFS install.</p>						

Figure 7 (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
5798DWDD	400	3390 3380 9345	9 10 10	12000	1500	Test disk. Also Server machine's, RTMESA, 192 disk. Used to store object files created during product build. VMSYS:5798DWDD.TBUILD
5798DWDD	401	3390 3380 9345	9 10 10	12000	1500	Production disk. Also Server machine's, RTMESA, 191 A disk. VMSYS:RTMESA.(1)
5798DWDD	191	3390 3380 9345	9 10 10	12000	1500	5798DWDD user ID's 191 minidisk VMSYS:5798DWDD.

Note: Cylinder values defined in this table are based on a 4K block size. FB-512 block and SFS values are derived from the 3380 cylinder values in this table. The FBA blocks are listed as 1/2K but should be CMS formatted at 1K size. 8400 4K blocks are needed for SFS install.

5.3.1 User ID Requirements

RTM requires two user ID's:

- 5798DWDD is used for installation and service. This userid requires access to CP maclibs: HCPESAME, HCPOM1, HCPOM2, HCPPSI and HCPGPI. By default, these are located on the MAINT 190 and 193 disks. If this is not correct for your system, ensure that the disks that do contain these maclibs are accessible to user 5798DWDD.

In addition, RTM requires access to the DMSGPI maclib and the HL-assembler (Release 4). By default, these files are located on the MAINT 190 and 19E disks. Again, if this is does not reflect your system, ensure that the disks containing the DMSGPI maclib and the HL-assembler are accessible to user 5798DWDD.

- (1)RTMESA is the suggested product server machine. It requires class E privilege because RTM accesses CP control block data areas during execution.

Note: Wherever the locations of your maclibs and HL-assembler are, you must ensure that they are on minidisks or directories that are accessed when the product is built. For VMSES/E installations, this is done by simply accessing the minidisks or directories before invoking the build commands.

6.0 Installation Instructions

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

The step-by-step procedures are in two column format. The steps to be performed are in bold large numbers. Commands for these steps are on the left hand side of the page in bold print. Additional information for a command may exist to the right of the command. For more information about the two column format see "Understanding Dialogs with the System" in the *z/VM 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 RTM, adapt these instructions as needed for your environment.

Note

The sample console output presented throughout these instructions was produced on a z/VM 3.1.0 system. If you're installing RTM on a different z/VM system, the results obtained for some commands may differ from those depicted here.

6.1 VMSES/E Installation Process Overview

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

- Plan Your Installation

Use the VMFINS command to load several VMSES/E files from the product tape and to obtain RTM 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 RTM.

- Install the RTM Product

Use the VMFINS command to load the RTM 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 6.8, "Post-Installation Considerations" on page 26.

- Place RTM Files into Production

Once the product files have been tailored and the operation of RTM 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 RTM

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 mdisk/SFS directory requirements
 - required products

To obtain planning information for your environment:

1 Log on as RTM 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 RTM 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 RTM 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 RTM.

Notes:

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

vmfins install ppf 5798DWDD {RTM | RTMSFS} (plan nomemo)

Use **RTM** for installing on minidisks or **RTMSFS** 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 RTM. For example, you will need to specify your PPF override file name instead of 5798DWDD 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 5798DWDD RTM
             :PRODID 5798DWDD%RTM?
             Enter 0 (No), 1 (Yes) or 2 (Exit)
0
VMFINS2603I Processing product :PPF 5798DWDD RTM :PRODID
             5798DWDD%RTM
VMFREQ1909I 5798DWDD PLANINFO created on your A-disk
VMFREQ2805I Product :PPF 5798DWDD RTM :PRODID 5798DWDD%RTM
             has passed requisite checking
VMFINT2603I Planning for the installation of product :PPF 5798DWDD RTM
             :PRODID 5798DWDD%RTM
VMFRMT2760I VMFRMT processing started
VMFRMT2760I VMFRMT processing completed successfully
VMFINS2760I VMFINS processing completed successfully
```

Note

Complete this step only if you received message VMFREQ2806W.

If you receive the following VMFREQ2806W message, you must do some additional processing.

```
VMFREQ2806W The following requisites for product :PPF 5798DWDD RTM
:PRODID 5798DWDD%RTM are not satisfied:
```

Type	Product	Component	PTF
-----	-----	-----	-----
Prerequisite	3VMVMB10		
Requisite	5696234E		

This message indicates that 5654-A17, product z/VM Version 3 is a pre-requisite product for RTM, and that 5696-234, product HLASM Release 4 is a requisite product for RTM. Both must be installed prior to installing RTM.

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

vmfview install

6.3 Allocate Resources for Installing RTM

Use the planning information in the 5798DWDD PLANINFO file, created in the **PLAN** step, to:

- Create the 5798DWDD and RTMESA user directories for minidisk install

OR

- Create the 5798DWDD and RTMESA user directories for SFS install

6.3.1 Installing RTM on Minidisk

- 1 Obtain the user directories from the 5798DWDD PLANINFO file.

Note: User directory entries are 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 5798DWDD and RTMESA user ID's. Use the directory entries found in PLANINFO as a model as input to your system directory.

- 2** Add the MDISK statements to the directory entry for 5798DWDD. Use Figure 7 on page 9 to obtain the minidisk requirements.
- 3** Add the 5798DWDD and RTMESA directory entries to the system directory. Change the passwords from xxxxx to a valid password, in accordance with your security guidelines.
Note: Make sure a virtual printer is defined at virtual address 00E for the RTMESA user ID.
- 4** Place the new directories on-line using VM/Directory Maintenance (DIRMAINT) or an equivalent CP directory maintenance method.

Note

All minidisks for the 5798DWDD user ID must be CMS formatted before installing RTM.

6.3.2 Installing RTM in SFS Directories

- 1** Obtain the user directories from the 5798DWDD PLANINFO file.
Note: User directory entries are 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 5798DWDD and RTMESA user ID's. Use the directory entries found in PLANINFO as a model as input to your system directory.
- 2** Add the 5798DWDD and RTMESA directory entries to the system directory. Change the passwords from xxxxx to a valid password, in accordance with your security guidelines.
Note: Make sure a virtual printer is defined at virtual address 00E for the RTMESA user ID.
- 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 RTM SFS directories, the 4K block requirements for the directories are summarized in Figure 7 on page 9.

This information will be used when enrolling the 5798DWDD and RTMESA user ID's. in the VMSYS filepool.

- b** Enroll user 5798DWDD and RTMESA in the VMSYS filepool using the ENROLL USER command:

```
ENROLL USER 5798DWDD VMSYS: (BLOCKS blocks)
ENROLL USER RTMESA 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 RTM. 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 RTM you will need to add space to the filepool. See the *z/VM CMS File Pool Planning, Administration, and Operation* manual for information on adding space to a filepool.
- d** Create the necessary subdirectories listed in the 5798DWDD PLANINFO file using the CREATE DIRECTORY command.

```
set filepool vmsys:
create directory VMSYS:5798DWDD.SOURCE
create directory VMSYS:5798DWDD.SAMPLE
create directory VMSYS:5798DWDD.DELTA
create directory VMSYS:5798DWDD.APPLYALT
create directory VMSYS:5798DWDD.APPLYPROD
create directory VMSYS:5798DWDD.TBUILD
```

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

A complete list of default RTM SFS directories is provided in Figure 7 on page 9.

- e** Give the **MAINT** user ID READ authority to the general-use test build directory, and give the **5798DWDD** user ID write authority to the RTMESA user ID's top level directory, using the GRANT AUTHORITY command.

```
grant auth vmsys:5798DWDD.tbuid to maint (read newread)
grant auth vmsys:rtmesa. to 5798DWDD (write newwrite)
```

If necessary, see the *z/VM: CMS Command Reference* manual for more information about the GRANT AUTHORITY command.

- f** If you intend to use an SFS directory as the work space for the 5798DWDD and RTMESA user ID's, include the following IPL control statement in the 5798DWDD and RTMESA directory entries:

```
IPL CMS PARM FILEPOOL VMSYS
```

This will cause CMS to automatically access the 5798DWDD's and RTMESA's top directory as file mode A.

SFS Considerations

If you are installing to an SFS directory and your A-disk is also an SFS directory but in a different filepool, Coordinated Resource Recovery (CRR) needs to be running on your system.

6.4 Install RTM

The *ppfname* used throughout these installation instructions is **5798DWDD**, which assumes you are using the PPF supplied by IBM for RTM. If you have your own PPF override file for RTM, you should use your file's *ppfname* instead of **5798DWDD**. The *ppfname* you use should be used **throughout** the rest of this procedure.

- 1** Logon to the installation user ID **5798DWDD**.
- 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** Skip to step 4 on page 20 if the minidisks that contain the DMSGPI maclib and HL-assembler are the 190 and 19E disks. If they **are** different than the 190 and 19E disks, then access commands will need to be added to the PROFILE EXEC, and a PPF override will be required.

a Add additional access commands to the PROFILE EXEC.

```
xedit profile exec a
====> bottom
====> input 'access addr fm'
====> file
```

Where *addr* is the minidisk address containing the DMSGPI maclib and/or HL-assembler and *fm* is the desired filemode.

Add as many **access** commands to the profile exec as necessary for accessing the disks containing the DMSGPI maclib and HL-assembler.

Avoid using filemodes E through M since they are necessary for installing and servicing RTM.

b Create a product parameter file (PPF) override to cause VMSES/E to leave the minidisk(s) containing the DMSGPI maclib and HL-assembler accessed during VMFSETUP processing.

The following is an example of a PPF override which will cause VMSES/E to leave specific filemodes accessed during VMFSETUP processing.

```
:OVERLST. RTM RTMSFS
*
* ===== *
* Override Section for RETAIN control tag for RTM component *
* ===== *
:RTM. RTM 5798DWDD
:RETAIN. fm
:END.
*
* ===== *
* Override Section for RETAIN control tag for RTMSFS component *
* ===== *
:RTMSFS. RTMSFS 5798DWDD
:RETAIN. fm
:END.
*
```

Where *fm* are the filemodes from the **access** commands added to the PROFILE EXEC in the previous step. More than one filemode can be listed on the RETAIN tag in the PPF.

Appendix B, "Create Product Parameter File (PPF) Override" on page 42 contains further information on creating PPF overrides for RTM.

4 Run the profile to access MAINT's minidisks.

profile

5 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**

6 Have the RTM installation tape mounted and attached to 5798DWDD at virtual address 181. The VMFINS EXEC requires the tape drive to be at virtual address 181.

7 Install RTM.

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 (5798DWDD), 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 5798DWDD {RTM | RTMSFS} (nomemo nolink

Use **RTM** for installing on minidisks or **RTMSFS** 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 5798DWDD RTM
:PRODID 5798DWDD%RTM?
Enter 0 (No), 1 (Yes) or 2 (Exit)

0
VMFINS2603I Processing product :PPF 5798DWDD RTM :PRODID
5798DWDD%RTM
VMFREQ2805I Product :PPF 5798DWDD RTM :PRODID 5798DWDD%RTM
has passed requisite checking
VMFINT2603I Installing product :PPF 5798DWDD RTM :PRODID
5798DWDD%RTM
VMFSET2760I VMFSETUP processing started for 5798DWDD RTM
VMFUTL2205I Minidisk|Directory Assignments:
String Mode Stat Vdev Label/Directory
VMFUTL2205I LOCALSAM E R/W 2C2 5792C2
VMFUTL2205I APPLY F R/W 2A6 5792A6
VMFUTL2205I G R/W 2A2 5792A2
VMFUTL2205I DELTA H R/W 2D2 5792D2
VMFUTL2205I BUILD0 I R/W 400 579400
VMFUTL2205I BUILD1 J R/W 401 579401
VMFUTL2205I BUILD6 K R/O 190 MNT190
VMFUTL2205I BUILD6 S R/O 190 MNT190
VMFUTL2205I BUILD7 L R/O 193 MNT193
VMFUTL2205I BASE1 M R/W 2B2 5792B2
VMFUTL2205I ----- A R/W 191 579191
VMFUTL2205I ----- B R/O 5E5 MNT5E5
VMFUTL2205I ----- D R/W 51D SES51D
VMFUTL2205I ----- Y/S R/O 19E MNT19E
VMFSET2760I VMFSETUP processing completed successfully
VMFREC2760I VMFREC processing started
VMFREC1852I Volume 1 of 1 of INS TAPE 0100
VMFREC1851I (1 of 7) VMFRCAXL processing AXLIST
VMFRCX2159I Loading n part(s) to DELTA 2D2 (H)
VMFREC1851I (2 of 7) VMFRCPTF processing PARTLST
:
VMFREC1851I (7 of 7) VMFRCALL processing SAMPLE
VMFRC2159I Loading part(s) to LOCALSAM 2C2 (E)
VMFRC2159I Loaded n part(s) to LOCALSAM 2C2 (E)
VMFREC2760I VMFREC processing completed successfully
VMFINT2603I Product installed
VMFINS2760I VMFINS processing completed successfully

```

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

vmfview install

6.5 Post Install Tailoring

The following table describes the sample files provided with RTM that have been installed to the 2C2 local samples disk. This section will have you copy the sample files to the 400 test build disk in a form usable by RTM.

Figure 8. RTM 1.5.3 Supplied Sample Files

Sample File Name	Sample Description
PROFILE EXEC SAMP	Sample PROFILE EXEC for the RTMESA server, which will set up PF keys and invokes the RTM MODULE. It will be copied as PROFILE EXEC on the 400 minidisk. The default PROFILE exec will also set MSG and WNG off for the virtual machine. MSG and WNG are set off, so as to avoid receiving system messages, operator warnings, and the "midnight message" from z/VM. All of these can cause the terminal to go into a HOLDING state and stop RTM from processing data until the screen is cleared.
RTM CONFSAMP	Provides a sample configuration file for the RTMESA server. It will be copied as RTM RTMCONFIG on the 400 minidisk.
RTMCPUID CONFSAMP	Provides a sample CPU ID mapping configuration file for the RTMESA server. It will be copied as RTMCPUID RTMCONFIG on the 400 minidisk.
RTMINIT EXEC SAMP	Sample RTMINIT EXEC which can be used to initialize the RTMESA server from a separate user ID through the VMCF interface. It will be copied as RTMINIT EXEC on the 400 minidisk. This sample is supplied for compatibility with previous releases of RTM. The recommended method for initializing the RTMESA server in RTM 1.5.3 is via the configuration file interface.

In addition, the SNAPP MODULE is a sample program which uses the SNAP interface. The SNAP interface allows a virtual machine to extract RTM data for its own manipulation. It can be found, after installation is complete, on the 400 disk. This program can be used as a model for other application programs. The assemble file is RTMSNAPP.

- 1** Log on to 5798DWDD, if you are not already logged on to it.
- 2** Copy the sample files to the test build minidisk.
 - a** If installing using minidisks

access 2c2 e

access 400 i

vmfcopy * confsamp e = rtmconfig i (prodid 5798DWDD%RTM olddate

vmfcopy * execsamp e = exec i (prodid 5798DWDD%RTM olddate

The VMFCOPY command will update the VMSES PARTCAT file on the 400 minidisk.

b If installing using SFS

```
access VMSYS:5798DWDD.SAMPLE e
access VMSYS:5798DWDD.TBUILD i
vmfcopy * confsamp e = rtmconfg i (prodid 5798DWDD%RTM olddate
vmfcopy * execsamp e = exec i (prodid 5798DWDD%RTM olddate
```

The VMFCOPY command will update the VMSES PARTCAT file on the VMSYS:5798DWDD.TBUILD SFS directory.

- 3** Tailor each of the files that you just copied. See information on the CPUID and RTM configuration files in the *VM/ESA RTM R5 Program Description/Operations* for details on configuring these files.

What's Next?

You have now finished tailoring RTM.

To complete the install process, by compiling all RTM assemble parts and building the executable modules, you **must have** the HL-assembler (5696-234) Release 4 installed.

If you have a service tape to apply to RTM/ESA go to 7.0, "Service Instructions" on page 29 to complete the installation, returning to 6.6, "Update Build Status Table for RTM" when reaching the VMFBLD step. Otherwise continue with 6.6, "Update Build Status Table for RTM" to complete the installation.

6.6 Update Build Status Table for RTM

- 1** Update the VM SYSBLDS software inventory file for RTM.

```
vmfins build ppf 5798DWDD {RTM | RTMSFS} (all nolink
```

Use **RTM** for installing on minidisks or **RTMSFS** for installing in Shared File System directories.

The ALL option for VMFINS BUILD will build all RTM 1.5.3 objects, regardless of whether they include service, and update the Software Inventory build status table showing that the product 5798DWDD has been built.

Note

Complete this step only if you received message VMFREQ2806W.

If you receive the following VMFREQ2806W message, you must do some additional processing.

```
VMFREQ2806W The following requisites for product :PPF 5798DWDD RTM
:PRODID 5798DWDD%RTM are not satisfied:
```

Type	Product	Component	PTF
-----	-----	-----	-----
Requisite	5696234E		

This message indicates that 5696-234, product HLASM Release 4 is a requisite product for RTM which must be installed prior to installing RTM.

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

vmfview install

6.7 Place RTM Into Production

Important note

This procedure should only be done when you have successfully tested the RTM install.

Placing the RTM 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.

6.7.1 Copy RTM Code to the Server Minidisk

- 1 Log on to 5798DWDD, if you are not already logged on to it.
- 2 Copy files from the test build disk to the production build disk.

b If installing using SFS

access VMSYS:5798DWDD.TBUILD e

access 19e f

vmfcopy vmc module e = = f (prodid 5798DWDD%RTM replace olddate

The VMFCOPY command will update the VMSES PARTCAT file on MAINT's 19E minidisk.

Note: RTM users require this file to be placed on the 19E minidisk.

- 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 *z/VM Service Guide* for detailed information about how to save the CMS saved system.

6.8 Post-Installation Considerations

6.8.1 Activating RTM

Execute the following procedure to insure that RTM was installed properly:

- 1** Logon to RTMESA.
- 2** Initiate the execution of the RTM MODULE.

RTM

This will begin the execution of RTM.

- 3** When RTM is invoked, an RTM logo will initially appear followed five seconds later by an output screen. This will verify that RTM was installed correctly.

The first automatic display will occur approximately five seconds after the program is started (after the logo is presented). Once the automatic display occurs, terminate RTM processing.

QUIT

This will terminate the execution of RTM.

- 4 Review for errors the log created by RTM while processing the configuration file.

XEDIT rtmconfg log a

Correct any errors identified. Repeat the activation steps until no more configuration processing errors are identified.

You have now completed RTM installation verification.

6.8.2 Access to RTM via the VMC command

The use of the VMC command to access RTMESA must be issued from a separate virtual machine. The VMC module should be placed on a common disk such that it can be accessed by all concerned. RTM commands may then be executed through VMCF by entering:

VMC userid command

The *userid* is the user ID of the virtual machine running RTM (in this document, referred to as RTMESA) and *command* is any valid RTM command.

The VMC module is supported in toleration mode for XA or ESA mode virtual machines.

6.8.3 Service to CP control blocks

Note: Any service applied to the following HCP control blocks/modules may affect the RTM module and require that the RTM module be rebuilt.

Once the fields have been modified, reassemble **ALL** RTM modules, and generate a new RTM module. See A.1, "RTM Product Rebuild" on page 41 in Appendix A, "Local Modification Example: Assemble File" for further information on rebuilding RTM executables.

CP Control blocks used by RTM 1.5.3

HCPASCBK	HCPMEXBK	HCPsieBK
HCPCLASS	HCPMTEBK	HCPsRMBK
HCPcPVOL	HCPpFXPG	HCPsYSCM
HCPDVTYP	HCPPLSBK	HCPtCMBK
HCPEQUAT	HCPRDEV	HCPVDEV
HCPExpBK	HCPRSM	HCPVMBK
HCPFSATE	HCPSCMBK	HCPXSTMG
HCPMDC		VMCBLOKS

End of CP Control blocks used by RTM 1.5.3

6.9 Building RTM For Multiple VM Systems.

RTM 1.5.3 runs on z/VM Version 3. Some installations may want to build RTM modules that run on a number of z/VM systems. This can easily be done.

You should install the product according to the VMSES/E instructions on one of your systems.

If you wish to create an RTM MODULE that will run on another VM system at your installation, then all you need to do is make sure you have a minidisk that contains the CP maclibs for that VM system in your search order and build the product with the instructions provided in A.1, "RTM Product Rebuild" on page 41.

In summary, if you have multiple VM systems, you only need to install RTM on one of the systems. As you build RTM modules to run on each of your systems, make sure that you build each RTM module with the corresponding CP maclibs that were used to build the system that the RTM module is intended to run on. Thus, you want to make the CP maclibs used to build your various systems accessible to user 5798DWDD.

<p>RTM is now installed and built on your system.</p>
--

7.0 Service Instructions

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

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 RTM using VMSES/E.

- Setup Environment

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

- Merge Service

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

- Receive Service

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

- Apply Service

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

- Reapply Local Service (if applicable)

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

- Build New Levels

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

- Place the New Service into Production

Once the service is satisfactorily tested it should be put into production by copying the new service to the production disk, etc.

7.2 Servicing RTM

7.2.1 Prepare to Receive Service

Electronic Service (envelope file)

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

- *VLSTnum* for the documentation envelope
- *VPTFnum* for the service envelope

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

The *ppfname* used throughout these servicing instructions is **5798DWDD**, which assumes you are using the PPF supplied by IBM for RTM. If you have your own PPF override file for RTM, you should use your file's *ppfname* instead of **5798DWDD**. The *ppfname* you use should be used **throughout** the rest of this procedure, unless otherwise stated differently.

1 Logon to RTM service user ID **5798DWDD**

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 RTM CORrective service tape mounted and attached to **5798DWDD**. (If you have a SERVLINK file make sure that it is available on the A-disk.)

4 Receive the documentation.

a If receiving the service from tape

vmfrec info

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

b If receiving the service from an envelope file

vmfrec info (env vlstnum

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

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

vmfview receive

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

- 6** Read the product memo (5798DWDD MEMO) before going on.

- 7** Setup the correct product access order.

vmfsetup 5798DWDD {RTM | RTMSFS}

5798DWDD is the PPF that was shipped with the product. If you have your own PPF override you should substitute your PPF name for 5798DWDD.

Use **RTM** if the product is installed on minidisks or **RTMSFS** if the product is installed in Shared File System directories.

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

vmfmrchk 5798DWDD {RTM | RTMSFS} apply

Use **RTM** if the product is installed on minidisks or **RTMSFS** if the product is installed in Shared File System directories.

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

vmfview mrd

7.2.2 Receive the Service

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

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

- 1 Receive the service.

- a If receiving the service from tape

vmfrec ppf 5798DWDD {RTM | RTMSFS}

Use **RTM** if the product is installed on minidisks or **RTMSFS** if the product is installed in Shared File System directories.

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

- b If receiving the service from the PTF envelope file

vmfrec ppf 5798DWDD {RTM | RTMSFS} (env vptfnum

Use **RTM** if the product is installed on minidisks or **RTMSFS** if the product is installed in Shared File System directories.

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

vmfview receive

7.2.3 Apply the Service

- 1 Apply the new service.

vmfapply ppf 5798DWDD {RTM | RTMSFS}

Use **RTM** if the product is installed on minidisks or **RTMSFS** if the product is installed 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 *z/VM: System Messages and Codes*, or use on-line HELP.

vmfview apply

Note

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

For further information on the local modification process, refer to the "Installing Local Service" 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 service guide when doing local modifications to RTM.

- **zvm** should be **5798DWDD**
- *compname* should be **RTM** or **RTMSFS** (minidisk or SFS)
- *appid* should be **5798DWDD**
- *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 *z/VM Service Guide*, you should return back to this program directory at 7.2.4, "Update the Build Status Table" on page 34.

Note: There is a local modification example in Appendix A, "Local Modification Example: Assemble File" on page 39.

7.2.4 Update the Build Status Table

- 1 Update the Build Status Table with serviced parts.

vmfbld ppf 5798DWDD {RTM | RTMSFS} (status

Use **RTM** if the product is installed on minidisks or **RTMSFS** if the product is installed 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 5798DWDD \$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 5798DWDD \$PPF
on 191 (A) from level \$PFnnnnn

vmfppf 5798DWDD *

Note: If you've created your own PPF override then use your PPF name instead of 5798DWDD.

**copyfile 5798DWDD \$PPF a = = d (olddate replace
erase 5798DWDD \$PPF a**

Note: Do not use your own PPF name in place of 5798DWDD for the COPYFILE and ERASE commands.

vmfbld ppf 5798DWDD {RTM | RTMSFS} (status

1

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

Use **RTM** if the product is installed on minidisks or **RTMSFS** if the product is installed 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

In order to continue!

To complete the build process by compiling all RTM assemble parts and building the executable modules, you **must have** the HL-assembler (5696-234) Release 4 installed.

- 1 Rebuild RTM serviced parts.

vmfbld ppf 5798DWDD {RTM | RTMSFS} (serviced

Use **RTM** if the product is installed on minidisks or **RTMSFS** if the product is installed in Shared File System directories.

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

vmfview build

7.3 Place the New RTM Service Into Production

Important note

This procedure should only be done when you have successfully tested the new service to RTM.

Placing the RTM 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.

7.3.1 Copy the New RTM Serviced Files Into Production

- 1** Log on to 5798DWDD, if you are not already logged on to it.
- 2** Copy files from the test build disk to the production build disk.
 - a** If servicing using minidisks

```
access 400 i
access 401 j
vmfcopy ** i = j (prodid 5798DWDD%RTM replace olddate
```

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

- b** If servicing using SFS

```
access VMSYS:5798DWDD.TBUILD i
access VMSYS:RTMESA j (forcerw
vmfcopy ** i = j (prodid 5798DWDD%RTM replace olddate
```

The VMFCOPY command will update the VMSES PARTCAT file on the VMSYS:RTMESA SFS directory.

- 3** Log off 5798DWDD so the RTMESA server machine can gain write access to the 401 minidisk when establishing your production environment.

logoff

7.3.2 Copy RTM to MAINT 19E Minidisk for Production

- 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 minidisk

a If servicing using minidisks

link 5798DWDD 400 *addr rr*

access *addr e*

access 19E f

vmfcopy vmc module e = = f (prodid 5798DWDD%RTM replace olddate

addr is any free disk address on the MAINT user ID

The VMFCOPY command will update the VMSES PARTCAT file on MAINT's 19E minidisk.

Note: RTM users require this file to be placed on the 19E minidisk.

b If servicing using SFS

access VMSYS:5798DWDD.TBUILD e

access 19e f

vmfcopy vmc module e = = f (prodid 5798DWDD%RTM replace olddate

The VMFCOPY command will update the VMSES PARTCAT file on MAINT's 19e minidisk.

Note: RTM users require this file to be placed on the 19E minidisk.

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 *z/VM Service Guide* for detailed information about how to save the CMS saved system.

You have finished servicing RTM.

Appendix A. Local Modification Example: Assemble File

Notes!

- This appendix provides an example for updating the RTMDIS ASSEMBLE part. You should substitute the file name of the part you are modifying for RTMDIS in the instructions.
- RTM 1.5.3 ships updates to its assemble files but does NOT send the replacement TEXT file. Therefore, instead of updating the local VVT (version vector table) with the new TEXT name, the local VVT should be updated to reflect a change has been made to the ASSEMBLE file.
- You can use these instructions to create local modifications to RTM EXEC parts as well.
- In order to compile any RTM assemble part you **must have** the HL-assembler (5696-234) Release 4 installed.

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 Set up the required access order

vmfsetup 5798DWDD {RTM | RTMSFS}

Use **RTM** if the product is installed on minidisks or **RTMSFS** if the product is installed in Shared File System directories.

2 Update the local service level (VVTLCL) of the software inventory to create a record of the local modification

vmfsim logmod 5798DWDD vvtlcl *fmlocal* tdata :part rtmdis assemble :mod lcl0001.updt0001

fmlocal is the fm of the local modification and sample disk or directory

3 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 rtmdis auxlcl *fmlocal* (noprof

====> input UPDT0001 LCL LCL0001 * comment

====> file

fmlocal is the fm of the local modification and sample disk or directory

4 XEDIT Source file to create the update file

xedit rtmdis assemble (ctl rtmesa5
====> fm *fmlocal*

fmlocal is the fm of the local modification and
sample disk or directory

5 Make your desired changes

6 Issue the XEDIT file command

====> file

7 Use VMFHLASM to generate the text deck with the changes. The following is a list of execs which can be substituted for VMFHLASM when doing local modifications to RTM parts other than ASSEMBLE:

- EXECUPDT to update a \$EXEC part

Note: This step may be skipped for other RTM parts such as full part replacement parts or build lists.

vmfhlasm rtmdis rtmesa5 (nosetup ctl

8 If you are modifying rtmdis, a second compile is required.

vmfhlasm rtmdis rtmesame (nosetup ctl

9 Copy the updated text deck to the DELTA disk or directory

vmfcopy rtmdis text a = = *fmdelta* (prodid 5798DWDD%RTM olddate replace
erase rtmdis text a

fmdelta is the fm of the DELTA disk or directory

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

10 If you are modifying rtmdis, a second text file must be copied to the DELTA disk.

vmfcopy rtmdis txtesame a = = *fmdelta* (prodid 5798DWDD%RTM olddate replace
erase rtmdis txtesame a

- 11** Use VMFREPL to create or update the 5798DWDD \$SELECT file on the alternate apply disk

vmfrepl rtmdis text 5798DWDD rtm (\$select nocopy file text

- 12** Build the RTM product by issuing VMFBLD

vmfbld ppf 5798DWDD {RTM|RTMSFS} (serviced Use component name **RTM** if using minidisks or **RTMSFS** if using SFS.

A.1 RTM Product Rebuild

If the RTM modules need to be rebuilt between servicing, select one or more of the following commands:

- **VMFSETUP 5798DWDD {RTM | RTMSFS}**
This will ensure the correct disk access order for building RTM.
- **VMFBLD PPF 5798DWDD {RTM | RTMSFS} RTMACLIB (ALL**
This will rebuild the RTM maclib.
- **VMFBLD PPF 5798DWDD {RTM | RTMSFS} RTMASM (ALL**
This will reassemble all the RTM assemble files.
- **VMFBLD PPF 5798DWDD {RTM | RTMSFS} RTMMOD (ALL**
This will build the RTM module, the VMC module and the SNAPP module.

Note: Use **RTM** if the product was installed on minidisk, or **RTMSFS** if the product was installed in Shared File System directories.

Whenever the above commands are issued, the new modules must be put into production by following the instructions in 7.3, “Place the New RTM Service Into Production” on page 36.

Appendix B. Create Product Parameter File (PPF) Override

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

Note: Do **not** modify the product supplied 5798DWDD \$PPF or 5798DWDD PPF files to change the file pool name or any other installation parameters. If the 5798DWDD \$PPF file is serviced, the existing \$PPF file will be replaced, and any changes to that file will be lost; by creating your own \$PPF override, your updates will be preserved.

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

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

xedit *overname* \$PPF *fm*2

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

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

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

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

```

:OVERLST. RTMSFS
*
* ===== *
* Override Section for Initial Installation (Using SFS Directories) *
* ===== *
:RTMSFS. RTMSFS 5798DWDD
:DCL. REPLACE
&ADISK      DIR MYP00L1:5798DWDD.
&BAS1Z      DIR MYP00L1:5798DWDD.SOURCE
&SAMPZ      DIR MYP00L1:5798DWDD.SAMPLE
&DELTZ      DIR MYP00L1:5798DWDD.DELTA
&APPLX      DIR MYP00L1:5798DWDD.APPLYALT
&APPLZ      DIR MYP00L1:5798DWDD.APPLYPROD
&BLD0Z      DIR MYP00L1:5798DWDD.TBUILD
&BLD1Z      DIR MYP00L1:RTMESA.
&BLD6Z      LINK MAINT 190 190 RR
&BLD7Z      LINK MAINT 193 193 RR
&5798DWDD   USER 5798DWDD
&RTMESA     USER RTMESA
:EDCL.
:END.
*

```

(This override will replace the :DCL. section of the RTMSFS override area of the 5798DWDD \$PPF file.)

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

file

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

erase *overname* \$PPF *fm*

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

vmfppf *overname* RTMSFS

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

Now that the *overname* PPF file has been created, you should specify *overname* instead of 5798DWDD as the PPF name to be used for those VMSES/E commands that require a PPF name.

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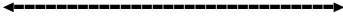
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