Program Directory for

Performance Toolkit for VM

function level 640

Program Number 5741-A07

for Use with
z/VM version 6

Document Date: November 2016

GI13-3475-00

Note

Before using this information and the product it supports, be sure to read the general information under "Notices" on page 27.

This program directory, dated November 2016, applies to IBM® Performance Toolkit for VM™, function level 640, Program Number 5741-A07.

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

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Performance Toolkit for VM Web Information

The Performance Toolkit for VM web page can be visited at URL:

   www.vm.ibm.com/related/perfkit

where you will find:

- Additional useful information, hints and tips.

- Comparison to RealTime Monitor (RTM) and Performance Reporting Facility (VMPRF)

- A PDF version of the Performance Toolkit for VM, function level 640 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 Performance Toolkit for VM. You should read all of this program directory before installing the program and then keep it for future reference.

When you are ready to install Performance Toolkit for VM™, read section 3.1, "Preventive Service Planning" on page 5. This section tells you how to find any updates to the information and procedures in this program directory.

The program directory contains the following sections:

- 2.0, "Program Materials" on page 2 identifies the basic and optional program materials and documentation for Performance Toolkit for VM.

- 3.0, "Program Support" on page 5 describes the IBM support available for Performance Toolkit for VM.

- 4.0, "Program and Service Level Information" on page 6 lists the APARs (program level) and PTFs (service level) incorporated into Performance Toolkit for VM.

- 5.0, "Installation and Migration Requirements and Considerations" on page 7 identifies the resources and considerations for installing, migrating and using Performance Toolkit for VM.

- 6.0, "Installation Instructions" on page 12 provides detailed installation and tailoring instructions for Performance Toolkit for VM.

- 7.0, "Service Instructions" on page 17 provides detailed servicing instructions for Performance Toolkit for VM.

- Appendix A, "Moving Performance Toolkit for VM to SFS Directories and Creating a PPF Override" on page 18 provides detailed information on moving Performance Toolkit for VM into the shared file system (SFS) and overriding the default Product Parameter File (PPF).

- Appendix B, "Disabling Performance Toolkit for VM" on page 25 provides a description of disabling Performance Toolkit for VM, function level 640, when it is not licensed.

1.1 Program Description

Performance Toolkit for VM Function Level 640 is a pre-installed, priced feature that provides performance management capabilities for VM systems and their guests. It allows systems programmers to monitor users, system performance and to analyze bottlenecks. Performance Toolkit for VM is also designed to facilitate the operation of VM systems, thereby improving operator efficiency and productivity.

2.0 Program Materials

An IBM program is identified by a program number. The program number for Performance Toolkit for VM is 5741-A07.

The program announcement material describes the features supported by Performance Toolkit for VM. 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

Performance Toolkit for VM is a priced feature of z/VM® version 6 release 4 and is distributed pre-installed in a disabled state as part of the z/VM system deliverable. Therefore, there are no basic machine readable materials. **If you want to enable and use Performance Toolkit for VM then you MUST order Performance Toolkit for VM to obtain a license for it.** Refer to the z/VM version 6 release 4 Software Announcement for information on ordering and licensing z/VM version 6 release 4 and its features.

2.2 Optional Machine-Readable Material

There are no optional machine-readable materials for Performance Toolkit for VM.

2.3 Program Publications

The following sections identify the basic and optional publications for Performance Toolkit for VM.

2.3.1 Basic Program Publications

Figure 1 identifies the informal shipped documentation for Performance Toolkit for VM. One copy of this publication is included with your Performance Toolkit for VM order.

Figure 1. Basic Material: Informal Documentation

Publication Title	Form Number
Memo to Users IBM Performance Toolkit for VM, function level 640	GI13-3480-00

The following publication is part of your order for Performance Toolkit for VM but it is only available as softcopy. Refer to the 2.3.3, "Softcopy Publications" on page 3 for the World Wide Web URLs that the program directory can be found at.

Figure 2. Basic Material: Unlicensed Publications

Publication Title	Form Number
Program Directory for Performance Toolkit for VM	GI13-3475-00

2.3.2 Base Program Publications

Figure 3 identifies the base program publications associated with Performance Toolkit for VM.

Figure 3. Program Publications: New Editions

Publication Title	Form Number
z/VM: Performance Toolkit Guide	SC24-6209
z/VM: Performance Toolkit Reference	SC24-6210

2.3.3 Softcopy Publications

The Performance Toolkit for VM publications are supplied in softcopy form as part of the *IBM Online Library: z/VM Collection* in BookManager® and Adobe® Portable Document Format (PDF). Performance Toolkit for VM publications, with the exception of the Program Directory, are also available in the z/VM library in the IBM Knowledge Center web site:

   http://www.ibm.com/support/knowledgecenter/SSB27U

The Performance Toolkit for VM publications, including this program directory, also are available in Adobe Portable Document Format from the z/VM Library pages on the World Wide Web; the URL for this home page is:

   www.vm.ibm.com/library

2.4 Program Source Materials

No program source materials or viewable program listings are provided for Performance Toolkit for VM.

2.5 Publications Useful During Installation and Service

The publications listed in Figure 4 might be useful during the installation of Performance Toolkit for VM.

Figure 4. Publications Useful During Installation / Service on z/VM version 6 release 4

Publication Title	Form Number
z/VM: Performance	SC24-6208
z/VM: Performance Toolkit Guide	SC24-6209
z/VM: Performance Toolkit Reference	SC24-6210
z/VM: VMSES/E Introduction and Reference	GC24-6243
z/VM: CP Planning and Administration	SC24-6178
z/VM: CP Commands and Utilities Reference	SC24-6175
z/VM: CMS Commands and Utilities Reference	SC24-6166
z/VM: CMS File Pool Planning, Administration, and Operation	SC24-6167
z/VM: Installation Guide	GC24-6246
z/VM: Service Guide	GC24-6247
z/VM: CP Messages and Codes	GC24-6177
z/VM: CMS and REXX/VM Messages and Codes	GC24-6161
z/VM: Other Components Messages and Codes	GC24-6207

3.0 Program Support

This section describes the IBM support available for Performance Toolkit for VM.

3.1 Preventive Service Planning

Before installing Performance Toolkit for VM, 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**	**Description**
568411218	640	VMPTK640	PTK/640	Installation Information
568411218	640	VMPTK640	yynnRSU	RSU Service Recommendations

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

www.vm.ibm.com/service/rsu

3.2 Statement of Support Procedures

With Performance Toolkit for VM you are entitled to support under the basic warranty for z/VM version 6 release 4. You should note that the Software Subscription and Support for Performance Toolkit for VM is *automatically* added to your order. This provides zSeries® service to which you are likely accustomed. If you do not want the Software Subscription and Support for Performance Toolkit for VM, then you must take specific action to decline it when ordering Performance Toolkit for VM.

Report any difficulties you have using this program that are defect oriented to your IBM Support Center. If an APAR (Authorized Program Analysis Report) is required, the Support Center will provide the address to which any needed documentation can be sent.

Figure 6 identifies the component ID (COMPID), Retain Release and Field Engineering Service Number (FESN) for Performance Toolkit for VM.

Figure 6. Component IDs

RETAIN			
COMPID	**Release**	**Component Name**	**FESN**
568411218	640	Performance Toolkit for VM, function level 640	0408274

4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of Performance Toolkit for VM. 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 previous releases of Performance Toolkit for VM have been incorporated into this new release.

VM64559 VM64750 VM65044 VM65046 VM65068 VM65081 VM65091 VM65100 VM65103
VM65149 VM65157 VM65164 VM65172 VM65178 VM65185 VM65243 VM65273 VM65295
VM65314 VM65325 VM65330 VM65347 VM65357 VM65361 VM65399 VM65502 VM65507
VM65527 VM65528 VM65529 VM65585 VM65589 VM65590 VM65591 VM65599 VM65624
VM65656 VM65679 VM65697 VM65698 VM65699 VM65812 VM65829

4.2 Service Level Information

Check the VMPTK640 PSP bucket upgrade 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 Performance Toolkit for VM web page at **www.**vm.ibm.com/related/perfkit for any additional service hints, tips, and concerns.

4.3 Cumulative Service Tape

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

The stacked RSU tape can be obtained by ordering PTF UM97640.

Check the PSP bucket upgrade VMPTK640 and subset yynnRSU (where yynn is the RSU service level) for the latest RSU available. For a list of the PTFs included on the RSU, see the service memo from the tape or refer to the RSU-BY-LVL information obtained from the VM service RSU web site at url:

> **www.**vm.ibm.com/service/rsu

5.0 Installation and Migration Requirements and Considerations

The following sections identify the system requirements for installing and activating Performance Toolkit for VM.

5.1 Hardware Requirements

There are no special hardware requirements for Performance Toolkit for VM.

5.2 Program Considerations

The following sections list the programming considerations for installing and activating Performance Toolkit for VM functions.

5.2.1 Operating System Requirements

Performance Toolkit for VM function level 640 supports the following VM operating system:

- z/VM version 6 release 4

5.2.2 Other Program Product Requirements

GDDM® (5684-168) is optional and will be used if available.

5.2.3 Migration Considerations

5.2.3.1 Migrating from Performance Toolkit for VM, function level 5nn or 6nn

Starting with z/VM version 6 release 2 the Performance Toolkit for VM production build disks are no longer in shared file.

If you use the migration procedures or upgrade installation documented in the *z/VM: Installation Guide* to migrate Performance Toolkit for VM then the files listed in Figure 9 on page 13, as well as the PROFILE EXEC for the PERFSVM user ID, will be migrated. If these customizable files were changed in Performance Toolkit for VM FL640, and you had also made changes to them on your z/VM V5.4, 6.2 or 6.3 system   , then you will be told to rework your changes.

5.2.3.2 Migrating From Performance Toolkit for VM, function level 440

If you were running Performance Toolkit for VM 4.4.0 then your customized Performance Toolkit files resided on the CCC minidisk or SFS directory VMSYS:4VMPTK40.PERFTK.CUSCONFIG. In this new level of Performance Toolkit for VM the customized files will reside on the 1CC minidisk or SFS directory VMPSFS:6VMPTK40.PERFTK.CONFIG. Since the 1CC minidisk (or SFS directory) is now a production build disk you will need to update the customizable files using the VMSES/E Local Modification procedure in order to preserve your changes to these files. Refer to 6.3, "Tailoring Performance Toolkit for VM Customization Files" on page 13 for instructions on modifying or changing the Performance Toolkit for VM customizable files.

5.2.3.3 Migrating from RealTime Monitor (RTM)

Performance Toolkit for VM already provides the same information that was provided by RTM. For a cross reference of RTM commands to Performance Toolkit for VM commands see the Performance Toolkit for VM home page at:

www.vm.ibm.com/related/perfkit/pkitrtm.html

5.2.4 Program Installation and Service Considerations

This section describes items that should be considered before you install or service Performance Toolkit for VM.

- Performance Toolkit for VM is pre-installed on the z/VM version 6 release 4 System deliverables.

- With the packaging changes introduced to z/VM to provide support for a z/VM single system image (SSI), note that **all Performance Toolkit for VM service activity now must be performed using user ID MAINT***vrm* **(e.g. MAINT640).**

- VMSES/E is required to install and service this product.

- If you modify or eliminate any of the IBM-supplied user IDs, minidisk addresses or SFS directory names that are associated with Performance Toolkit for VM, you **must** create an appropriate PPF override for the **SERVP2P $PPF** file.

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

- If you choose to move Performance Toolkit for VM from minidisk to SFS after initial z/VM installation, or if you want to change from the default SFS file pool or directories, then you will need to follow the steps in Appendix A, "Moving Performance Toolkit for VM to SFS Directories and Creating a PPF Override" on page 18. These steps help you create the SFS directories, move the files to the SFS directories and create a PPF override file.

- RSUs will be supplied as necessary. Service between RSUs can be obtained through CORrective service.

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 Performance Toolkit for VM.

Important Installation Notes:

- All user IDs and minidisks are listed here so that you can get an idea of the resources required by Performance Toolkit for VM. They are already defined and allocated on the z/VM System deliverable, as Performance Toolkit for VM is pre-installed.

- With the exception of the Performance Toolkit for VM user ID that owns the service resources (6VMPTK40), **all** the Performance Toolkit for VM server virtual machines are defined by multiconfiguration virtual machine definitions. The 6VMPTK40 user ID is defined by a single-configuration virtual machine definition. See *z/VM: CP Planning and Administration* for information on multiconfiguration and single-configuration virtual machine definitions.

- The CP user ID directory entry for PERFSVM is shipped with statement:

  SHARE ABS 3%

  It is recommended that you **DO NOT CHANGE** this statement.

| Minidisk owner (user ID) | Default Address | Storage in Cylinders | | FB-512 Blocks | SFS 4K Blocks | Usage |
		DASD	CYLS			Default SFS Directory Name
6VMPTK40	2B2	3390	12	17280	2160	Contains all the base code shipped with Performance Toolkit for VM. **VMPSFS:6VMPTK40.PERFTK.BASE**
6VMPTK40	2C2	3390	2	2880	360	Contains sample customization files. **VMPSFS:6VMPTK40.PERFTK.SAMPLE**
6VMPTK40	2C4	3390	5	7200	900	Contains local modifications **VMPSFS:6VMPTK40.PERFTK.LOCALMOD**
6VMPTK40	2D2	3390	50	72000	9000	Contains serviced files **VMPSFS:6VMPTK40.PERFTK.DELTA**

Figure 7 (Page 1 of 3). DASD Storage Requirements for (Required) Target Minidisks

Notes:

1. Cylinder values defined in this table are based on a 4k block size. FB-512 and SFS block values are derived from the 3390 cylinder values in this table.

2. 41580 4K blocks are needed for SFS installation.

| Minidisk owner (user ID) | Default Address | Storage in Cylinders | | FB-512 Blocks | SFS 4K Blocks | Usage |
		DASD	CYLS			Default SFS Directory Name
6VMPTK40	2A6	3390	2	2880	360	Contains AUX files and software inventory tables that represent the test service level of Performance Toolkit for VM **VMPSFS:6VMPTK40.PERFTK.APPLYALT**
6VMPTK40	2A2	3390	2	2880	360	Contains AUX files and software inventory tables that represent the service level of Performance Toolkit for VM that is currently in production. **VMPSFS:6VMPTK40.PERFTK.APPLYPROD**
6VMPTK40	200	3390	20	28800	3600	Test BUILD disk. This code will be copied to Performance Toolkit for VM production disk. **VMPSFS:6VMPTK40.PERFTK.TBUILD**
6VMPTK40	191	3390	12	17280	2160	6VMPTK40 user ID's 191 minidisk **VMPSFS:6VMPTK40.**
6VMPTK40	29D	3390	16	23040	2880	Contains help files. **VMPSFS:6VMPTK40.PERFTK.PERFTKHELP**
PERFSVM	191	3390	120	172800	21600	Performance Toolkit for VM user ID's 191 work minidisk **VMSYS:PERFSVM.**
PERFSVM	195	3390	60	86400	10800	Performance Toolkit for VM user ID's 195 minidisk for output files. **VMSYS:PERFSVM.WORK195**
PERFSVM	201	3390	40	57600	n/a	Production BUILD disk.
PERFSVM	1CC	3390	2	2880	n/a	Contains customized files.

Figure 7 (Page 2 of 3). DASD Storage Requirements for (Required) Target Minidisks

Notes:

1. Cylinder values defined in this table are based on a 4k block size. FB-512 and SFS block values are derived from the 3390 cylinder values in this table.

2. 41580 4K blocks are needed for SFS installation.

Figure 7 (Page 3 of 3). DASD Storage Requirements for (Required) Target Minidisks						
Minidisk owner (user ID)	**Default Address**	**Storage in Cylinders**		**FB-512 Blocks**	**SFS 4K Blocks**	**Usage**
		DASD	**CYLS**			**Default SFS Directory Name**
PERSMAPI	191	3390	120	172800	21600	PERSMAPI user ID's 191 work minidisk (IBM use only user ID) **VMSYS:PERSMAPI.**
PERSMAPI	195	3390	60	86400	10800	PERSMAPI user ID's 195 minidisk for output files. (IBM use only user ID) **VMSYS:PERSMAPI.WORK195**

Notes:

1. Cylinder values defined in this table are based on a 4k block size. FB-512 and SFS block values are derived from the 3390 cylinder values in this table.

2. 41580 4K blocks are needed for SFS installation.

Figure 8. DASD Storage Requirements for Collecting Monitor Data						
Minidisk owner (user ID)	**Default Address**	**Storage in Cylinders**		**FB-512 Blocks**	**SFS 4K Blocks**	**Usage**
		DASD	**CYLS**			**Default SFS Directory Name**
MONWRITE	191	3390	300	432000	n/a	VM disk containing monitor data **Note:** This size varies depending on the magnitude of monitor data.

Note: Cylinder values defined in this table are based on a 4K block size. FB-512 block values are derived from the 3390 cylinder values in this table.

6.0 Installation Instructions

Performance Toolkit for VM is pre-installed in a disabled state on the z/VM System deliverable.

This chapter describes the procedures to complete the installation and customize Performance Toolkit for VM.

Each step of the 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 support Performance Toolkit for VM, adapt these instructions as needed for your environment.

6.1 Performance Toolkit for VM Enablement and Customization Process Overview

The following is a brief description of the main steps to complete the enablement and customization of Performance Toolkit for VM.

```
┌── Did you do an upgrade installation? ──────────────────────────────────────┐
│                                                                             │
│  If you used the upgrade installation procedure documented in the z/VM: Installation Guide to upgrade a │
│  z/VM version 6 release 2 or 3 system with Performance Toolkit for VM enabled to a z/VM version 6 │
│  release 4 system, no further enablement or customization is necessary. You installation of │
│  Performance Toolkit for VM is complete.                                     │
│                                                                             │
└─────────────────────────────────────────────────────────────────────────────┘
```

```
┌── Have you Licensed Performance Toolkit for VM? ────────────────────────────┐
│  Performance Toolkit for VM is pre-installed on z/VM version 6 release 4 in a DISABLED state. **If, and** │
│  **only if,** you have a license for Performance Toolkit for VM, function level 640 proceed with the │
│  installation to enable it for use.                                         │
└─────────────────────────────────────────────────────────────────────────────┘
```

- Set Performance Toolkit for VM to the ENABLED state.

    This will allow Performance Toolkit for VM to run.

- Tailor customization files

    Information about file tailoring for the program is presented in 6.3, "Tailoring Performance Toolkit for VM Customization Files" on page 13.

- Place Performance Toolkit for VM files into production

Once the product has been tailored, the product files are copied from the test BUILD disk(s) to the production BUILD disk(s). When running in an SSI cluster this step must be repeated on each member.

- Perform Post-installation Tasks

  Information about the initial activation of the program is presented in 6.5, "Post-Installation Considerations" on page 15. When running in an SSI cluster this step must be repeated on each member.

6.2 Enable Performance Toolkit for VM for Use

In order to use Performance Toolkit for VM once you have acquired a license for it, you need to follow the instructions in the **MEMO TO USERS for IBM Performance Toolkit for VM, function level 640** to enable it for use.

What's Next?

Once you have completed the enablement instructions in the *MEMO TO USERS for IBM Performance Toolkit for VM* you need to return to this program directory and continue with either

- 6.3, "Tailoring Performance Toolkit for VM Customization Files."

  OR

- 6.4, "Place Performance Toolkit for VM Into Production" on page 15 if you do not need to tailor any customizable files at this time.

6.3 Tailoring Performance Toolkit for VM Customization Files

Note: Read the section 5.2.3, "Migration Considerations" on page 7 before continuing in this section.

The following table describes the sample customization files provided with Performance Toolkit for VM that have been installed to the 1CC customization files disk.

Figure 9 (Page 1 of 2). Performance Toolkit for VM, function level 640 Supplied Sample Customization Files	
Sample File Name	**Sample Description**
FCONX $PROFILE	Sample profile used when Performance Toolkit for VM is started. This file is to provide settings to Performance Toolkit for VM.
FCONX REPORTS	Sample reports file for Performance Toolkit for VM. This file allows you to define which part of the collected performance data should be printed when either a PRINT ALL command is entered or when average data are printed automatically prior to RESET.
FCONX TRENDREC	Sample file to select which machine readable detailed trend records are to be produced.
FCONX SUMREC	Sample file to select which machine readable summary records are to be produced.

Figure 9 (Page 2 of 2). Performance Toolkit for VM, function level 640 Supplied Sample Customization Files	
Sample File Name	**Sample Description**
FCONXREP SETTINGS	Sample setup for running FCONXREP EXEC in batch mode.
Note: See the *z/VM: Performance Toolkit Guide* for further information on the sample control files and their use.	

All of the Performance Toolkit for VM customization files are delivered as replacement-maintained parts. In order to make your site changes to these files, you need to use VMSES/E to create a local modification to the files. Review the *z/VM: Performance Toolkit Guide* for details on configuring these files. If you need to make changes to these files that are not going to be permanent then you can copy the files to the A-disk of the user ID that will be running Performance Toolkit for VM and update them there.

To make permanent changes to the customizable files listed in Figure 9 on page 13 use the following instructions to create a local modification for them.

1 Log on to **MAINT640**, if you are not already logged on to it.

If running in an SSI cluster you can log MAINT640 on to any member system.

2 Create and apply the local modification

Note: Repeat this step for each file you need to modify.

a Run the LOCALMOD command to create the local modification for a customizable file.

localmod perftk *partfn partft*   *partfn* and *partft* is the file name and file type of the customizable file, in Figure 9 on page 13, that you are modifying.

b Reply to any prompt messages.

c Make your changes to the displayed file. See the *z/VM: Performance Toolkit Guide* manual for details on configuring these files.

d File your changes.

====> file   Enter **file** on the XEDIT command line

3 Run the SERVICE command to build the local modification(s).

service perftk build

6.4 Place Performance Toolkit for VM Into Production

This step will copy the Performance Toolkit for VM files from its test BUILD disks or SFS directories to its production BUILD disks or SFS directories. If you are running in an SSI cluster environment this will also enable Performance Toolkit for VM on each member system.

Note: If running in an SSI cluster you need to repeat the following steps on each member.

1 Log on to **MAINT640**, if you are not already logged on to it.

2 Copy any updated (local modified, serviced by RSU or COR before enabled) Performance Toolkit for VM files into production.

put2prod perftk   This command may take several minutes to complete.

6.5 Post-Installation Considerations

To start using Performance Toolkit for VM you need to do the following.

Note: If running in an SSI cluster you need to repeat the following steps on each member.

1 Log on to the PERFSVM user ID. The PERFSVM profile will run. It will access the required minidisks or SFS directories and start Performance Toolkit for VM.

2 You need to remove the comments from the monitor commands in the PERFSVM user ID's PROFILE EXEC in order to enable the monitor domain data that you want to collect.

In order to do this you need to stop Performance Toolkit for VM by pressing the PF3 Quit Key twice. Then XEDIT the PROFILE EXEC, make your changes, and type FILE on the XEDIT command line. Restart Performance

Toolkit for VM by typing PROFILE and pressing enter. Disconnect the PERFSVM user ID by typing DISC and pressing enter.

Note: If this has not been done then when you get to the section *'Performance Monitoring Mode'*, in the "Guided Tour" chapter, in the *z/VM: Performance Toolkit Guide*, you will not have any monitor data collected for analysis.

3 Refer to the chapter 'Preparing the Performance Toolkit' in the *z/VM: Performance Toolkit Guide* for information on interfaces that can be set up with Performance Toolkit for VM, such as an Internet Interface. This chapter will also refer you to the "Guided Tour" chapter in the *z/VM: Performance Toolkit Guide* for installation verification steps.

4 You may also want to have the PERFSVM user ID automatically started when z/VM is IPL'd. See the CP Planning and Administration Guide for information on how to add entries to the PROFILE EXEC for the AUTOLOG1 user ID. Remember that the SFS servers need to be started before PERFSVM if you've installed on SFS. Also, If you are starting the web interface, you'll need TCPIP started before trying to start PERFSVM. Also, if your installation is using an External Security Manager (ESM) you should review its program directory for additional AUTOLOG considerations.

Performance Toolkit for VM is now installed and built on your system.

7.0 Service Instructions

```
┌─ Note - z/VM Automated Service Procedure ─────────────────────────────────┐
│                                                                            │
│  The z/VM automated service procedure (use of the SERVICE and PUT2PROD    │
│  commands) is required for applying service to Performance Toolkit for VM. │
│                                                                            │
└────────────────────────────────────────────────────────────────────────────┘
```

7.1 Servicing Performance Toolkit for VM

Use the service instructions documented in the *z/VM: Service Guide* to receive, apply, build and place Performance Toolkit for VM service into production.

Appendix A. Moving Performance Toolkit for VM to SFS Directories and Creating a PPF Override

By default, Performance Toolkit for VM is installed to minidisks as part of the z/VM System deliverable unless you choose to install Performance Toolkit for VM to SFS during the initial z/VM installation. If you did not install Performance Toolkit for VM into SFS directories and want to move it now, you can. Refer to Figure 7 on page 9 to see which minidisks can reside in SFS. IBM recommends that you use the default file pool, VMPSFS, but you can use a file pool of your choosing. If you are running in an SSI cluster then this new file pool needs to be accessible to all members. This can be accomplished by specifying the SSI startup parameter in the file pool server DMSPARMS file.

A summary of the steps that are needed to place Performance Toolkit for VM into SFS are:

- Allocate space in the user-defined or default file pool

- Provide the user IDs 6VMPTK40 and MAINT640 with access to the file pool

- Create the necessary Performance Toolkit for VM subdirectories

- Copy files from the minidisks to the new SFS subdirectories

- Create a PPF override, if not using the default file pool or subdirectory names.

Where to next

You need to do one of the following:

- If you want to place Performance Toolkit for VM into SFS directories **using the defaults defined in the 6VMPTK40 PPF file**, and you are running in a non-SSI or a single member SSI environment, you can use the **MOVE2SFS** command, as documented in the *z/VM: CP Commands and Utilities Reference* manual.

- If you want to place Performance Toolkit for VM into your **own user-defined file pool or SFS directories**, or want to use the default SFS directories and you are running in a multiple member SSI environment, continue with the instructions in A.1, "Setup SFS File Pool and Directories" on page 19.

- If you **only need to create a PPF override**, continue with the instructions in A.3, "Create Product Parameter File (PPF) Override" on page 22.

If you were pointed to this appendix from another section and you have completed the steps required (whether provided in this appendix or in the *z/VM: CP Commands and Utilities Reference*) you should now return to your original section to continue.

A.1 Setup SFS File Pool and Directories

Notes:

1. The steps that follow help you determine the Performance Toolkit for VM file pool space requirements, file pool enrollment, and SFS directory definitions. If not all of these steps are required - for example, if you are changing only SFS directory or subdirectory names - adapt these instructions as needed for your environment.

2. The steps that follow assume that a user-defined SFS file pool name is being used. If you will be using the VM default file pool name, VMPSFS, substitute it in any place you see the text 'user-defined file pool' or variable *userfilepool*.

3. For more information about planning for, generating and managing a file pool and server, see *z/VM: CMS File Pool Planning, Administration and Operation*.

1 Determine the number of 4k blocks that are required for the SFS directories, for each user ID, by adding up the 4K blocks required for each SFS directory you plan to use.

If you intend to use all of the default Performance Toolkit for VM SFS directories, the 4K block requirements for each directory are summarized in Figure 7 on page 9.

This information will be used when the 6VMPTK40 and PERFSVM user IDs are enrolled in the user-defined file pool.

2 Enroll users 6VMPTK40 and PERFSVM in the user-defined file pool using the ENROLL USER command:

```
ENROLL USER 6VMPTK40 userfilepool: (BLOCKS blocks
ENROLL USER PERFSVM userfilepool: (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 the user-defined file pool.

3 Make the system maintenance user ID, MAINT640, a file pool administrator for the user-defined file pool so that it can update files on the Performance Toolkit for VM service directories by adding the MAINT640 user ID to the ADMIN startup parameter in the user-defined file pool DMSPARMS file.

4 Determine if there are enough blocks available in the file pool to install Performance Toolkit for VM. This information can be obtained from the QUERY FILEPOOL STORGRP command. The output from this command is a list of storage groups and the number of 4K blocks free. If the number of blocks free is smaller than the total 4K blocks needed (refer to Figure 7 on

page 9 to obtain total blocks needed) to install Performance Toolkit for VM you need to add space to the file pool. See *z/VM: CMS File Pool Planning, Administration, and Operation* manual for information on adding space to a file pool.

5 Create the necessary subdirectories using the CREATE DIRECTORY command.

Note: All of the Performance Toolkit for VM subdirectories are shown in the create directory commands. If you are not planning to create all of them, then just enter the commands for the ones you are planning to create.

A complete list of default Performance Toolkit for VM SFS directories is provided in Figure 7 on page 9.

If you have changed any of the default SFS directory names then use your new name in place of the old name in the create directory command.

set filepool *userfilepool***:**
create directory *userfilepool***:6VMPTK40.perftk**
create directory *userfilepool***:6VMPTK40.perftk.base**
create directory *userfilepool***:6VMPTK40.perftk.sample**
create directory *userfilepool***:6VMPTK40.perftk.local**
create directory *userfilepool***:6VMPTK40.perftk.delta**
create directory *userfilepool***:6VMPTK40.perftk.applyalt**
create directory *userfilepool***:6VMPTK40.perftk.applyprod**
create directory *userfilepool***:6VMPTK40.perftk.tbuild**
create directory *userfilepool***:6VMPTK40.perftk.perftkhelp**
create directory *userfilepool***:PERFSVM.work195**

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

6 Give the **PERFSVM** user ID READ authority to the 6VMPTK40 user ID's test and production BUILD, configuration and help disks using the GRANT AUTHORITY command.

grant auth *userfilepool***:6VMPTK40.perftk.tbuild to PERFSVM (read newread**
grant auth *userfilepool***:6VMPTK40.perftk.perftkhelp to PERFSVM (read newread**

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

7 If you intend to use an SFS directory as the work space for the 6VMPTK40 and PERFSVM user id's, update the IPL control statement in the 6VMPTK40 and PERFSVM CP user directory entry to look like:

```
IPL CMS PARM FILEPOOL userfilepool
```

This will cause CMS to automatically access 6VMPTK40's and PERFSVM's top directory as file mode A. Refer to the *z/VM:CP Planning and Administration* for information on updating the CP user directory.

A.2 Copy Minidisk (or SFS) Files to SFS Directories

1 Copy the files from the Performance Toolkit for VM minidisks (or from the VMPSFS file pool if Performance Toolkit for VM is already installed there) to your new user-defined SFS file pool and directories using the VMFCOPY command.

Note: Repeat the ACCESS and VMFCOPY commands, that follow, for each disk or SFS directory you need to copy. Refer to Figure 7 on page 9 for the default minidisk and SFS directory names for Performance Toolkit for VM.

access *vdev* **e**
access *dirid* **f**
vmfcopy * * e = = f (prodid 6vmptk40%PERFTK olddate

Where

- *vdev* is the minidisk you are copying files from. If you are copying from SFS then substitute the default SFS directory name in place of *vdev*.

- *dirid* is the name of the (target) SFS directory that you are copying files to.

- 6VMPTK40%PERFTK is the PRODID defined within the 6VMPTK40 PPF file for the minidisk and SFS Performance Toolkit for VM components.

The VMFCOPY command will update the VMSES PARTCAT file on the target directory.

A.3 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 is how to change the shared file system (SFS) file pool where Performance Toolkit for VM files reside. Refer to the *z/VM: VMSES/E Introduction and Reference* for more information on PPF overrides.

Note: Do **not** modify the product supplied 6VMPTK40 $PPF, 6VMPTK40 PPF, SERVP2P $PPF or SERVP2P PPF files to change the VMPSFS or VMSYS file pool name or any other installation parameters. If a product $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 names, "VMPSFS" and "VMSYS" to "MYPOOL1":

1 Create a new $PPF override file, or edit an existing override file, for the SERVP2P $PPF file.

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

overname is the PPF override file name (such as "myperftk") 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 MAINT640 51D minidisk).

2 Create (or modify as required) the Variable Declarations (**:DCL.**) section for the PERFTKSFS and PERFTKSFSP2P override area so that it resembles the **:DCL.** section as shown below.

Note: The PPF file used by SERVICE, PUT2PROD and LOCALMOD is SERVP2P PPF therefore this example shows an override to the SERVP2P $PPF file.

```
:OVERLST. PERFTKSFS PERFTKSFSP2P
*
* ===================================================================== *
* Override Section for Initial Installation (Using SFS Directories)   *
* ===================================================================== *
:PERFTKSFS. PERFTKSFS SERVP2P
:DCL. UPDATE
&ADISK       DIR MYPOOL1:6VMPTK40.
&BAS1Z       DIR MYPOOL1:6VMPTK40.PERFTK.BASE
&SAMPZ       DIR MYPOOL1:6VMPTK40.PERFTK.SAMPLE
&LMODZ       DIR MYPOOL1:6VMPTK40.PERFTK.LOCALMOD
&DELTZ       DIR MYPOOL1:6VMPTK40.PERFTK.DELTA
&APPLX       DIR MYPOOL1:6VMPTK40.PERFTK.APPLYALT
&APPLZ       DIR MYPOOL1:6VMPTK40.PERFTK.APPLYPROD
&BLD0Z       DIR MYPOOL1:6VMPTK40.PERFTK.TBUILD
&BLD4Z       DIR MYPOOL1:6VMPTK40.PERFTK.PERFTKHELP
&PSVMA       DIR MYPOOL1:PERFSVM.
&PSVMZ       DIR MYPOOL1:PERFSVM.WORK195
:EDCL.
:END.
:PERFTKSFSP2P. PERFTKSFSP2P SERVP2P
:DCL. UPDATE
&ADISK       DIR MYPOOL1:6VMPTK40.
&BAS1Z       DIR MYPOOL1:6VMPTK40.PERFTK.BASE
&SAMPZ       DIR MYPOOL1:6VMPTK40.PERFTK.SAMPLE
&LMODZ       DIR MYPOOL1:6VMPTK40.PERFTK.LOCALMOD
&DELTZ       DIR MYPOOL1:6VMPTK40.PERFTK.DELTA
&APPLX       DIR MYPOOL1:6VMPTK40.PERFTK.APPLYALT
&APPLZ       DIR MYPOOL1:6VMPTK40.PERFTK.APPLYPROD
&BLD0Z       DIR MYPOOL1:6VMPTK40.PERFTK.TBUILD
&BLD4Z       DIR MYPOOL1:6VMPTK40.PERFTK.PERFTKHELP
&PSVMA       DIR MYPOOL1:PERFSVM.
&PSVMZ       DIR MYPOOL1:PERFSVM.WORK195
:EDCL.
:END.
*
```

This override will replace the *:DCL.* section of the PERFTKSFS and PERFTKSFSP2P override areas of the SERVP2P $PPF file.

3 If your $PPF override file was created as file mode A, copy it to the Software
Inventory minidisk (MAINT640 51D). The default file mode is D.

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

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

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

5 Update the VM SYSSUF Software Inventory table. Since you created a PPF
override to the SERVP2P $PPF file you need to make sure that the override
name you created is reflected in the PPF tags for Performance Toolkit for VM
in the VM SYSSUF table. Type in the command VMFUPDAT SYSSUF. This
will bring up a panel so that you can change the PPF names stored in the VM
SYSSUF file. Locate 6VMPTK40 under the 'Prodid' column. Replace the
PPF name for INSTPPF, BLDPPF and P2PPPF for 6VMPTK40 with your new
PPF override file name. Use PF5 to process your changes.

Now that the *overname* PPF file has been created, you should specify *overname*
instead of SERVP2P or 6VMPTK40 as the PPF name to be used for any VMSES/E
commands that require a PPF name for Performance Toolkit for VM.

Appendix B. Disabling Performance Toolkit for VM

If you had licensed and enabled Performance Toolkit for VM, function level 640 for use, and no longer are licensed for Performance Toolkit for VM, you need to explicitly disable Performance Toolkit for VM by following the instructions in the *MEMO TO USERS for IBM Performance Toolkit for VM, function level 640* section 'Performance Toolkit for VM Disablement'.

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