



# **Program Directory for Performance Toolkit for z/VM**

function level 720

Program Number 5741-A09

for Use with  
z/VM version 7

Document Date: September 2020

GI13-4361-01

**Note**

Before using this information and the product it supports, be sure to read the general information under “Notices” on page 26.

This program directory, dated September 2020, applies to IBM® Performance Toolkit for z/VM, function level 720, Program Number 5741-A09.

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## Performance Toolkit for z/VM Web Information

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

[www.vm.ibm.com/related/perfkit](http://www.vm.ibm.com/related/perfkit)

where you will find:

- Additional useful information, hints and tips.
- A PDF version of the Performance Toolkit for z/VM, function level 720 program directory available for viewing.
- Additional IBM VM performance resources.

Plan on visiting this URL often.

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## 1.0 Introduction

This program directory is intended for the system programmer responsible for program installation and maintenance. It contains information concerning the material and procedures associated with the installation of Performance Toolkit for z/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 z/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 z/VM.
- 3.0, “Program Support” on page 5 describes the IBM support available for Performance Toolkit for z/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 z/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 z/VM.
- 6.0, “Installation Instructions” on page 11 provides detailed installation and tailoring instructions for Performance Toolkit for z/VM.
- 7.0, “Service Instructions” on page 16 provides detailed servicing instructions for Performance Toolkit for z/VM.
- Appendix A, “Moving Performance Toolkit for z/VM to SFS Directories and Creating a PPF Override” on page 17 provides detailed information on moving Performance Toolkit for z/VM into the shared file system (SFS) and overriding the default Product Parameter File (PPF).
- Appendix B, “Disabling Performance Toolkit for z/VM” on page 24 provides a description of disabling Performance Toolkit for z/VM, function level 720, when it is not licensed.

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## 1.1 Program Description

Performance Toolkit for z/VM Function Level 720 is a pre-installed, priced feature that provides performance management capabilities for z/VM systems and their guests. It allows systems programmers to monitor users, system performance and to analyze bottlenecks. Performance Toolkit for z/VM is also designed to facilitate the operation of VM systems, thereby improving operator efficiency and productivity.

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## 2.0 Program Materials

An IBM program is identified by a program number. The program number for Performance Toolkit for z/VM is 5741-A09.

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

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### 2.1 Basic Machine-Readable Material

Performance Toolkit for z/VM is a priced feature of z/VM® version 7 release 2 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 z/VM then you MUST order Performance Toolkit for z/VM to obtain a license for it.** Refer to the z/VM version 7 release 2 Software Announcement for information on ordering and licensing z/VM version 7 release 2 and its features.

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### 2.2 Optional Machine-Readable Material

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

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### 2.3 Program Publications

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

#### 2.3.1 Basic Program Publications

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

*Figure 1. Basic Material: Informal Documentation*

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Publication Title	Form Number
Memo to Users IBM Performance Toolkit for z/VM, function level 720	GI13-4368-00

The following publication is part of your order for Performance Toolkit for z/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*

<b>Publication Title</b>	<b>Form Number</b>
<i>Program Directory for Performance Toolkit for z/VM</i>	GI13-4361-01

## 2.3.2 Base Program Publications

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

*Figure 3. Program Publications: New Editions*

<b>Publication Title</b>	<b>Form Number</b>
<i>z/VM: Performance Toolkit Guide</i>	SC24-6302
<i>z/VM: Performance Toolkit Reference</i>	SC24-6303

## 2.3.3 Softcopy Publications

Performance Toolkit for z/VM publications, with the exception of the Program Directory, are available in the z/VM library in the IBM Knowledge Center web site:

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

The Performance Toolkit for z/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](http://www.vm.ibm.com/library)

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## 2.4 Program Source Materials

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

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## 2.5 Publications Useful During Installation and Service

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

*Figure 4 (Page 1 of 2). Publications Useful During Installation / Service on z/VM version 7 release 2*

<b>Publication Title</b>	<b>Form Number</b>
<i>z/VM: Performance</i>	SC24-6301

Figure 4 (Page 2 of 2). Publications Useful During Installation / Service on z/VM version 7 release 2

<b>Publication Title</b>	<b>Form Number</b>
<i>z/VM: Performance Toolkit Guide</i>	SC24-6302
<i>z/VM: Performance Toolkit Reference</i>	SC24-6303
<i>z/VM: VMSES/E Introduction and Reference</i>	GC24-6336
<i>z/VM: CP Planning and Administration</i>	SC24-6271
<i>z/VM: CP Commands and Utilities Reference</i>	SC24-6268
<i>z/VM: CMS Commands and Utilities Reference</i>	SC24-6260
<i>z/VM: CMS File Pool Planning, Administration, and Operation</i>	SC24-6261
<i>z/VM: Installation Guide</i>	GC24-6292
<i>z/VM: Service Guide</i>	GC24-6325
<i>z/VM: CP Messages and Codes</i>	GC24-6270
<i>z/VM: CMS and REXX/VM Messages and Codes</i>	GC24-6255
<i>z/VM: Other Components Messages and Codes</i>	GC24-6300



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## 3.0 Program Support

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

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### 3.1 Preventive Service Planning

Before installing Performance Toolkit for z/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

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RETAIN®				
COMPID	Release	Upgrade	Subset	Description
568411218	720	VMPTK720	PTK/720	Installation Information
568411218	720	VMPTK720	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](http://www.vm.ibm.com/service/rsu)

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### 3.2 Statement of Support Procedures

With Performance Toolkit for z/VM you are entitled to support under the basic warranty for z/VM version 7 release 2. You should note that the Software Subscription and Support for Performance Toolkit for z/VM is *automatically* added to your order. This provides IBM Z® service to which you are likely accustomed. If you do not want the Software Subscription and Support for Performance Toolkit for z/VM, then you must take specific action to decline it when ordering Performance Toolkit for z/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 z/VM.

Figure 6. Component IDs

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RETAIN			
COMPID	Release	Component Name	FESN
568411218	720	Performance Toolkit for z/VM, function level 720	0408274

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## 4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of Performance Toolkit for z/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.

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### 4.1 Program Level Information

The following APAR fixes against previous releases of Performance Toolkit for z/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  
VM65647 VM65656 VM65679 VM65697 VM65698 VM65699 VM65812 VM65829 VM65959  
VM66085 VM66088 VM66145 VM66169 VM66186 VM66198 VM66207 VM66220 VM66222  
VM66234 VM66252 VM66259 VM66293

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### 4.2 Service Level Information

Check the VMPTK720 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 z/VM web page at [www.vm.ibm.com/related/perfkit](http://www.vm.ibm.com/related/perfkit) for any additional service hints, tips, and concerns.

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### 4.3 Cumulative Service Information

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

The current-level of the stacked z/VM RSU can be obtained by ordering PTF UM97720.

Check the PSP bucket upgrade VMPTK720 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](http://www.vm.ibm.com/service/rsu)

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## 5.0 Installation and Migration Requirements and Considerations

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

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### 5.1 Hardware Requirements

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

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### 5.2 Program Considerations

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

#### 5.2.1 Operating System Requirements

Performance Toolkit for z/VM function level 720 supports the following VM operating system:

- z/VM version 7 release 2

#### 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 z/VM, function level 5nn or 6nn

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

When you use the upgrade installation documented in the *z/VM: Installation Guide* to upgrade Performance Toolkit for z/VM then the files listed in Figure 9 on page 12, as well as the PROFILE EXEC for the PERFSVM user ID, will be migrated. If these customizable files were changed in Performance Toolkit for z/VM FL720, and you had also made changes to them on your z/VM 6.4 or z/VM 7.1 system, then you will be told to rework your changes.

## 5.2.4 Program Installation and Service Considerations

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

- Performance Toolkit for z/VM is pre-installed on the z/VM version 7 release 2 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 z/VM service activity now must be performed using user ID MAINT<sub>vrn</sub> (e.g. MAINT720)**.
- 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 z/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 z/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 z/VM to SFS Directories and Creating a PPF Override” on page 17. 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.

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## 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 z/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 z/VM. They are already defined and allocated on the z/VM System deliverable, as Performance Toolkit for z/VM is pre-installed.
- With the exception of the Performance Toolkit for z/VM user ID that owns the service resources (7VMPTK20), **all** the Performance Toolkit for z/VM server virtual machines are defined by multiconfiguration virtual machine definitions. The 7VMPTK20 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.

<i>Figure 7 (Page 1 of 2). DASD Storage Requirements for (Required) 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
7VMPTK20	2B2	3390	12	17280	2160	Contains all the base code shipped with Performance Toolkit for z/VM. <b>VMPSFS:7VMPTK20.PERFTK.BASE</b>
7VMPTK20	2C2	3390	2	2880	360	Contains sample customization files. <b>VMPSFS:7VMPTK20.PERFTK.SAMPLE</b>
7VMPTK20	2C4	3390	5	7200	900	Contains local modifications <b>VMPSFS:7VMPTK20.PERFTK.LOCALMOD</b>
7VMPTK20	2D2	3390	50	72000	9000	Contains serviced files <b>VMPSFS:7VMPTK20.PERFTK.DELTA</b>
7VMPTK20	2A6	3390	2	2880	360	Contains AUX files and software inventory tables that represent the test service level of Performance Toolkit for z/VM <b>VMPSFS:7VMPTK20.PERFTK.APPLYALT</b>
7VMPTK20	2A2	3390	2	2880	360	Contains AUX files and software inventory tables that represent the service level of Performance Toolkit for z/VM that is currently in production. <b>VMPSFS:7VMPTK20.PERFTK.APPLYPROD</b>
7VMPTK20	200	3390	20	28800	3600	Test BUILD disk. This code will be copied to Performance Toolkit for z/VM production disk. <b>VMPSFS:7VMPTK20.PERFTK.TBUILD</b>
7VMPTK20	191	3390	12	17280	2160	7VMPTK20 user ID's 191 minidisk <b>VMPSFS:7VMPTK20.</b>
7VMPTK20	29D	3390	16	23040	2880	Contains help files. <b>VMPSFS:7VMPTK20.PERFTK.PERFTKHELP</b>
<b>Notes:</b>						
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 2 of 2). 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
PERFSVM	191	3390	120	172800	21600	Performance Toolkit for z/VM user ID's 191 work minidisk  <b>VMSYS:PERFSVM.</b>
PERFSVM	195	3390	60	86400	10800	Performance Toolkit for z/VM user ID's 195 minidisk for output files.  <b>VMSYS:PERFSVM.WORK195</b>
PERFSVM	201	3390	40	57600	n/a	Production BUILD disk.
PERFSVM	1CC	3390	2	2880	n/a	Contains customized files.
PERSMAPI	191	3390	120	172800	21600	PERSMAPI user ID's 191 work minidisk (IBM use only user ID)  <b>VMSYS:PERSMAPI.</b>
PERSMAPI	195	3390	60	86400	10800	PERSMAPI user ID's 195 minidisk for output files. (IBM use only user ID)  <b>VMSYS:PERSMAPI.WORK195</b>

**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 <b>Note:</b> 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 z/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 z/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 z/VM, adapt these instructions as needed for your environment.

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### 6.1 Performance Toolkit for z/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 z/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 4 or a version 7 release 1 system with Performance Toolkit for z/VM enabled to a z/VM version 7 release 2 system, no further enablement or customization is necessary. Your installation of Performance Toolkit for z/VM is complete. Proceed to Section 7.

#### Have you Licensed Performance Toolkit for z/VM?

Performance Toolkit for z/VM is pre-installed on z/VM version 7 release 2 in a DISABLED state. **If, and only if,** you have a license for Performance Toolkit for z/VM, function level 720 proceed with the installation to enable it for use.

- Set Performance Toolkit for z/VM to the ENABLED state.

This will allow Performance Toolkit for z/VM to run.

- Tailor customization files

Information about file tailoring for the program is presented in 6.3, "Tailoring Performance Toolkit for z/VM Customization Files" on page 12.

- Place Performance Toolkit for z/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 14. When running in an SSI cluster this step must be repeated on each member.

## 6.2 Enable Performance Toolkit for z/VM for Use

In order to use Performance Toolkit for z/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 z/VM, function level 720* 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 z/VM* you need to return to this program directory and continue with either

- 6.3, “Tailoring Performance Toolkit for z/VM Customization Files.”
- OR
- 6.4, “Place Performance Toolkit for z/VM Into Production” on page 14 if you do not need to tailor any customizable files at this time.

## 6.3 Tailoring Performance Toolkit for z/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 z/VM that have been installed to the 1CC customization files disk.

Figure 9 (Page 1 of 2). Performance Toolkit for z/VM, function level 720 Supplied Sample Customization Files

Sample File Name	Sample Description
FCONX \$PROFILE	Sample profile used when Performance Toolkit for z/VM is started. This file is to provide settings to Performance Toolkit for z/VM.
FCONX REPORTS	Sample reports file for Performance Toolkit for z/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 z/VM, function level 720 Supplied Sample Customization Files

Sample File Name	Sample Description
FCONXREP SETTINGS	Sample setup for running FCONXREP EXEC in batch mode.
<b>Note:</b> See the <i>z/VM: Performance Toolkit Guide</i> for further information on the sample control files and their use.	

All of the Performance Toolkit for z/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 z/VM and update them there.

To make permanent changes to the customizable files listed in Figure 9 on page 12 use the following instructions to create a local modification for them.

**1** Log on to **MAINT720**, if you are not already logged on to it.

If running in an SSI cluster you can log MAINT720 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 12, 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**

### What's Next?

You have now finished tailoring Performance Toolkit for z/VM. Continue with 6.4, "Place Performance Toolkit for z/VM Into Production" on page 14.

## 6.4 Place Performance Toolkit for z/VM Into Production

This step will copy the Performance Toolkit for z/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 z/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 **MAINT720**, 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 z/VM files into production.

**put2prod perfTk**

This command may take several minutes to complete.

## 6.5 Post-Installation Considerations

### Deploying Linux® on z/VM

If you plan to deploy Linux on z/VM see the *z/VM: Getting Started with Linux on System z®* publication for more information on setting up Performance Toolkit for z/VM to monitor your z/VM system and Linux virtual servers.

To start using Performance Toolkit for z/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 z/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 z/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 z/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 z/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 z/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 z/VM.

---

## 7.1 Servicing Performance Toolkit for z/VM

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

---

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

By default, Performance Toolkit for z/VM is installed to minidisks as part of the z/VM System deliverable unless you choose to install Performance Toolkit for z/VM to SFS during the initial z/VM installation. If you did not install Performance Toolkit for z/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 z/VM into SFS are:

- Allocate space in the user-defined or default file pool
- Provide the user IDs 7VMPTK20 and MAINT720 with access to the file pool
- Create the necessary Performance Toolkit for z/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 z/VM into SFS directories **using the defaults defined in the 7VMPTK20 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 z/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 18.
- If you **only need to create a PPF override**, continue with the instructions in A.3, "Create Product Parameter File (PPF) Override" on page 21.

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 z/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 z/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 7VMPTK20 and PERFSVM user IDs are enrolled in the user-defined file pool.

- 2** Enroll users 7VMPTK20 and PERFSVM in the user-defined file pool using the ENROLL USER command:

```
ENROLL USER 7VMPTK20 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, MAINT720, a file pool administrator for the user-defined file pool so that it can update files on the Performance Toolkit for z/VM service directories by adding the MAINT720 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 z/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 z/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 z/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 z/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:7VMPTK20.perftk  
create directory userfilepool:7VMPTK20.perftk.base  
create directory userfilepool:7VMPTK20.perftk.sample  
create directory userfilepool:7VMPTK20.perftk.local  
create directory userfilepool:7VMPTK20.perftk.delta  
create directory userfilepool:7VMPTK20.perftk.applyalt  
create directory userfilepool:7VMPTK20.perftk.applyprod  
create directory userfilepool:7VMPTK20.perftk.tbuild  
create directory userfilepool:7VMPTK20.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 7VMPTK20 user ID's test and production BUILD, configuration and help disks using the GRANT AUTHORITY command.

```
grant auth userfilepool:7VMPTK20.perftk.tbuild to PERFSVM (read newread  
grant auth userfilepool:7VMPTK20.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 7VMPTK20 and PERFSVM user id's, update the IPL control statement in the 7VMPTK20 and PERFSVM CP user directory entry to look like:

```
IPL CMS PARM FILEPOOL userfilepool
```

This will cause CMS to automatically access 7VMPTK20'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 z/VM minidisks (or from the VMPSFS file pool if Performance Toolkit for z/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 z/VM.

```
access vdev e
```

```
access dirid f
```

```
vmfcopy * * e = f (prodid 7vmptk20%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.
- 7VMPTK20%PERFTK is the PRODID defined within the 7VMPTK20 PPF file for the minidisk and SFS Performance Toolkit for z/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 z/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 7VMPTK20 \$PPF, 7VMPTK20 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 MAINT720 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 MYP00L1:7VMPTK20.
&BAS1Z      DIR MYP00L1:7VMPTK20.PERFTK.BASE
&SAMPZ      DIR MYP00L1:7VMPTK20.PERFTK.SAMPLE
&LMODZ      DIR MYP00L1:7VMPTK20.PERFTK.LOCALMOD
&DELTZ      DIR MYP00L1:7VMPTK20.PERFTK.DELTA
&APPLX      DIR MYP00L1:7VMPTK20.PERFTK.APPLYALT
&APPLZ      DIR MYP00L1:7VMPTK20.PERFTK.APPLYPROD
&BLD0Z      DIR MYP00L1:7VMPTK20.PERFTK.TBUILD
&BLD4Z      DIR MYP00L1:7VMPTK20.PERFTK.PERFTKHELP
&PSVMA      DIR MYP00L1:PERFSVM.
&PSVMZ      DIR MYP00L1:PERFSVM.WORK195
:EDCL.
:END.
:PERFTKSFSP2P. PERFTKSFSP2P SERVP2P
:DCL. UPDATE
&ADISK      DIR MYP00L1:7VMPTK20.
&BAS1Z      DIR MYP00L1:7VMPTK20.PERFTK.BASE
&SAMPZ      DIR MYP00L1:7VMPTK20.PERFTK.SAMPLE
&LMODZ      DIR MYP00L1:7VMPTK20.PERFTK.LOCALMOD
&DELTZ      DIR MYP00L1:7VMPTK20.PERFTK.DELTA
&APPLX      DIR MYP00L1:7VMPTK20.PERFTK.APPLYALT
&APPLZ      DIR MYP00L1:7VMPTK20.PERFTK.APPLYPROD
&BLD0Z      DIR MYP00L1:7VMPTK20.PERFTK.TBUILD
&BLD4Z      DIR MYP00L1:7VMPTK20.PERFTK.PERFTKHELP
&PSVMA      DIR MYP00L1:PERFSVM.
&PSVMZ      DIR MYP00L1: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 (MAINT720 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 z/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 7VMPTK20 under the 'Prodid' column. Replace the PPF name for INSTPPF, BLDPPF and P2PPPF for 7VMPTK20 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 7VMPTK20 as the PPF name to be used for any VMSES/E commands that require a PPF name for Performance Toolkit for z/VM.

---

## Appendix B. Disabling Performance Toolkit for z/VM

If you had licensed and enabled Performance Toolkit for z/VM, function level 720 for use, and no longer are licensed for Performance Toolkit for z/VM, you need to explicitly disable Performance Toolkit for z/VM by following the instructions in the *MEMO TO USERS for IBM Performance Toolkit for z/VM, function level 720* section 'Performance Toolkit for z/VM Disablement'.



---

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## Reader's Comments

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