



# **Program Directory for VM/Pass-Through Facility**

Version 02 Release 01, Modification Level 01  
Release 01, Modification Level 01

Program Number 5684-100

for Use with  
VM/ESA

Document Date: April 1998

GI10-4664-00

**Note!**

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

This program directory, dated April 1998, applies to VM/Pass-Through Facility Version 02 Release 01, Modification Level 01 (PVM), Program Number 5684-100 for the following:

<b>COMPIDs</b>	<b>Feature Numbers</b>	<b>System Name</b>
568410001	7201	VM/ESA
	5811	
	5812	
	5814	
	7119	
	5253	
	5254	
	5258	
	7200	
	5631	
	5632	
	5780	

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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 PVM. 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 2 identifies the basic and optional program materials and documentation for PVM.
- 3.0, “Program Support” on page 6 describes the IBM support available for PVM.
- 4.0, “Program and Service Level Information” on page 8 lists the APARs (program level) and PTFs (service level) incorporated into PVM.
- 5.0, “Installation Requirements and Considerations” on page 9 identifies the resources and considerations for installing and using PVM.
- 6.0, “Installation Instructions” on page 20 provides detailed installation instructions for PVM.
- 7.0, “Service Instructions” on page 66 provides detailed servicing instructions for PVM.
- Appendix A, “Test the Installation/Service for PVM” on page 87 provides instructions on testing for PVM.
- Appendix B, “Local Modification Example: Assemble File” on page 100 provides a local modification example for PVM.
- Appendix C, “PVMG/VSE SPE Overview” on page 103 provides an overview of the PVMG/VSE function supplied with APAR VM57538.
- Appendix D, “Overriding the VMSYS File Pool Name” on page 109 provides instructions on overriding the VMSYS file pool name for PVM.
- Appendix E, “PVMG Enhancements provided in SPE VM58551” on page 113 provides an overview of the additional PVMG enhancements supplied with APAR VM58551.
- Appendix F, “Defining Remote BSC Devices to PVM” on page 120 provides instructions on setting up remote BSC devices for PVM.
- Appendix G, “PVM Server Enhancements provided in SPE VM60644” on page 126 provides an overview of the enhancements made to the PVM server, including multiple session capability when DIALing PVM, with APAR VM60644.
- Appendix H, “PVM Server Enhancements provided in SPE VM61373” on page 133 provides an overview of the enhancements made to the PVM and CVIEW servers, the DVMUSI MODULE, and the MPVM EXEC, with APAR VM61373.

Before installing PVM, 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.

---

## 2.0 Program Materials

An IBM program is identified by a program number and a feature code. The program number for PVM is 5684-100.

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

The following sections identify:

- The basic and optional program materials available with this program

---

### 2.1 Basic Machine-Readable Material

The distribution medium for this program is 9-track magnetic tape (written at 6250 BPI), 3480 cartridge, 1/4-inch tape cartridge, or 4mm DAT cartridge. The tape or cartridge contains all the programs and data needed for installation. PVM is installed using VMSES/E. See 6.0, "Installation Instructions" on page 20 for more information about how to install the program. Figure 1 describes the tape or cartridge. Figure 2 on page 3 describes the file content of the program tape or cartridge. Figure 3 on page 4 describes the file content of the NLS feature tape.

**Note:** A PVM Recommended Service Update (RSU) tape, if available, will accompany each order. This tape will be labeled 'yynnRSU', where 'yynn' indicates the RSU level.

*Figure 1 (Page 1 of 2). Basic Material: Program Tape*

Feature Number	Medium	Physical Volume	Tape Content	External Tape Label
5811	6250 tape	1	PVM 2.1.1	Base Product 1 of 1
5812	3480 cart.	1	PVM 2.1.1	Base Product 1 of 1
5814	.25" cart.	1	PVM 2.1.1	Base Product 1 of 1
7201	4 mm DAT cart.	1	PVM 2.1.1	Base Product 1 of 1
5253	6250 tape	1	PVM 2.1.1 Kanji NLS Feature	Japanese Kanji 1 of 1
5254	3480 cart	1	PVM 2.1.1 Kanji NLS Feature	Japanese Kanji 1 of 1
5258	.25" cart.	1	PVM 2.1.1 Kanji NLS Feature	Japanese Kanji 1 of 1

Figure 1 (Page 2 of 2). Basic Material: Program Tape

Feature Number	Medium	Physical Volume	Tape Content	External Tape Label
7119	4 mm DAT cart.	1	PVM 2.1.1 Kanji NLS Feature	Japanese Kanji 1 of 1
5631	6250 tape	1	PVM 2.1.1 German NLS Feature	German 1 of 1
5632	3480 cart	1	PVM 2.1.1 German NLS Feature	German 1 of 1
5780	.25" cart.	1	PVM 2.1.1 German NLS Feature	German 1 of 1
7200	4 mm DAT cart.	1	PVM 2.1.1 German NLS Feature	German 1 of 1

Figure 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	PVM Service
8	PVM Service
9	PVM Base Code
10	PVM Optional Base
11	PVM Samples
12	PVM Help
13	PVM Components
14	CVIEW Component

Figure 3. Program Tape: File Content of NLS Feature Tape

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<b>Tape File</b>	<b>Content</b>
1	Tape Header
2	Tape Header
3	Product Header
4	Product Memo
5	PVM NLS Feature Help

---

## 2.2 Optional Machine-Readable Material

There are no optional machine-readable materials for PVM.

---

## 2.3 Program Publications

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

### 2.3.1 Basic Program Publications

Figure 4 identifies the basic program publications for PVM. One copy of each of these publications is included when you order the basic materials for PVM. For additional copies, contact your IBM representative.

Figure 4. Basic Material

---

<b>Publication Title</b>	<b>Form Number</b>
VM/Pass-Through Facility Licensed Programming Specifications	GC24-5591-01
VM/Pass-Through Facility User's Guide	SC24-5555
VM/Pass-Through Facility Programmer's Reference	SC24-5556
VM/Pass-Through Facility Administration and Operation	SC24-5557-01
VM/Pass-Through Facility Messages	SC24-5648-01
VM/Pass-Through Facility Auto-Signon Reference	SC24-5656
VM/Pass-Through Facility TCP/IP Line Driver Support	SC24-5710

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### 2.3.2 Optional Program Publications

There are no optional publications for PVM.

---

## 2.4 Microfiche Support

There is no microfiche for PVM.

---

## 2.5 Publications Useful During Installation/Service

The publications listed in Figure 5, Figure 6, and Figure 7 may be useful during the installation of PVM. To order copies, contact your IBM representative.

*Figure 5. Publications Useful During Installation/Service on VM/ESA Version 1*

<b>Publication Title</b>	<b>Form Number</b>
VMSES/E Introduction and Reference	SC24-5444
VMSES/E 370 Feature Introduction and Reference for Licensed Products	SC24-5659
VM/ESA CP Planning and Administration	SC24-5521
VM/ESA Service Guide	SC24-5527
VM/ESA CMS Command Reference	SC24-5461
VM/ESA SFS and CRR Planning, Administration, and Operation	SC24-5649
VM/ESA System Messages and Codes	SC24-5529

*Figure 6. Publications Useful During Installation/Service on VM/ESA 2.1.0 and 2.2.0*

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

*Figure 7. Publications Useful During Installation/Service on VM/ESA 2.3.0*

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

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## 3.0 Program Support

This section describes the IBM support available for PVM.

---

### 3.1 Preventive Service Planning

Before installing PVM, check with your IBM Support Center or use either Information/Access or 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 8. PSP Upgrade and Subset ID*

---

<b>Retain</b>			
<b>COMPID</b>	<b>Release</b>	<b>Upgrade</b>	<b>Subset</b>
568410001	211	PVM211	PVM/211
568410001	211	PVM211	yynnRSU
568410001	211	PVM211	PVM/yy-n
568410001	211	PVM211	RSUINFO
568410001	211	PVM211	RSU-BY-LVL
568410001	211	PVM211	RSU-BY-APAR
568410001	211	PVM211	RSU-BY-PTF
568410001	2G1	PVM211	PVM/211
568410001	2J1	PVM211	PVM/211
568410001	211	VMPEINFO	PVM211

---

## 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 provide the address to which any needed documentation can be sent.

Figure 9 identifies the component IDs (COMPID), Retain Release and Field Engineering Service Numbers (FESN) for PVM.

*Figure 9. Component IDs*

---

<b>Retain</b>			
<b>COMPID</b>	<b>Release</b>	<b>Component Name</b>	<b>FESN</b>
568410001	211	PVM 2.1.1	0401164
568410001	2G1	PVM 2.1.1 Kanji	0401164
568410001	2J1	PVM 2.1.1 German	0401164

---

## 4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of PVM 2.1.1. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs integrated. Information about the cumulative service tape is also provided.

---

### 4.1 Program Level Information

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

VM50935	VM51963	VM52576	VM53178	VM53790	VM54607
VM51060	VM51996	VM52683	VM53191	VM53791	VM54616
VM51165	VM52055	VM52697	VM53223	VM53792	VM54617
VM51289	VM52171	VM52704	VM53276	VM53794	VM55072
VM51425	VM52208	VM52747	VM53313	VM53795	VM55195
VM51434	VM52289	VM52793	VM53327	VM53826	VM55310
VM51661	VM52358	VM52952	VM53338	VM54054	VM55445
VM51689	VM52410	VM52977	VM53412	VM54200	VM55565
VM51732	VM52419	VM52982	VM53447	VM54309	VM55615
VM51746	VM52502	VM52992	VM53615	VM54331	VM55618
VM51781	VM52503	VM53088	VM53660	VM54384	VM55952
VM51796	VM52515	VM53091	VM53776	VM54401	VM56017
VM51870	VM52538	VM53099			

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### 4.2 Service Level Information

This is the initial release of PVM 2.1.1. There are no PTFs on the installation tape.

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### 4.3 Cumulative Service Tape

An RSU tape for VM/Pass-Through Facility 2.1.1 is now available. See upgrade bucket PVM211 subset yynnRSU (where yynn is the RSU service level) for the latest RSU tape available. For the list of PTF's included on the RSU tape, see the service memo from the tape. The RSU tape can be obtained by ordering PTF UV99211.

---

## 5.0 Installation Requirements and Considerations

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

---

### 5.1 System Requirements

This section describes the system environment required to install and use PVM.

#### 5.1.1 Programming Requirements

There are no special programming requirements for the PVM.

---

### 5.2 DASD Storage Requirements

Figure 10 lists the user IDs and minidisks that are used to install and service PVM.

#### Important Installation Notes:

- The user ID's and minidisks will be defined in 6.1.1, "Plan Your Installation For PVM" on page 21 and are listed here so that you can get an idea of the resources that you will need prior to allocating them.
- P684100E 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 change the name. This can be done in 6.1.1, "Plan Your Installation For PVM" step 6 on page 22.
- If you chose to change the installation user ID, you must ensure that all the default virtual minidisk addresses for PVM are unique on the new installation user ID. You will have to create a PPF override to change any minidisk address conflicts. Use of the shared file system will help reduce these conflicts. However, any disk with \*NONSFS listed in the SFS 4K block column of Figure 10 must remain a minidisk.

Figure 10 (Page 1 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
P684100E	2B2	9345 3390 3380 3375 3350	15 13 15 24 19	18000	2250	Contains all of the base code shipped with PVM <b>VMSYS:P684100E.PVM.PRODUCT</b>
P684100E	2C2	9345 3390 3380 3375 3350	4 4 4 7 5	4800	600	Contains sample files and user local modifications for PVM <b>VMSYS:P684100E.PVM.SAMPLES</b>
P684100E	2D2	9345 3390 3380 3375 3350	40 35 40 64 51	48000	6000	Contains serviced files <b>VMSYS:P684100E.PVM.DELTA</b>
P684100E	2A6	9345 3390 3380 3375 3350	10 9 10 16 13	12000	1500	Contains AUX files and version vector table that represents your test level of PVM <b>VMSYS:P684100E.PVM.APPLY1</b>
P684100E	2A2	9345 3390 3380 3375 3350	10 9 10 16 13	12000	1500	Contains AUX files and version vector table that represent your production level of PVM <b>VMSYS:P684100E.PVM.APPLY2</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 3380 cylinder values in this table.
2. If you are not using CVIEW, then the P684100E 404 minidisk is not required. You must create a PPF override to remove this disk from the :DCL, :MDA, :RECINS, :RECSER, and :BLD sections of the PPF.
3. \*NONSFS in the SFS 4K block column means that disk cannot be installed to the shared file system and must remain a minidisk which will be defined in 6.1.2, "Allocate Resources for Installing PVM." on page 24.
4. The PVM and CVIEW server production code can be placed in an a shared file system. If this is desired, then replace the P684100E's 400, 401, 403, 404, and 405 minidisks with appropriate SFS directories. If the MPVM code on the P684100E 403 minidisk is placed in an SFS directory, then the MPVM EXEC will have to be modified, changing the link and access of PVM's 199 minidisk to the shared file directory chosen. The PVMG server production code located on P684100E's 402 minidisk cannot be placed on a shared file directory since GCS does not have support for SFS.

Figure 10 (Page 2 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
P684100E	29D	9345 3390 3380 3375 3350	10 9 10 16 13	12000	1500	Contains American English help files for PVM <b>VMSYS:P684100E.PVM.HELPAME</b>
P684100E	400	9345 3390 3380 3375 3350	14 13 14 24 19	16600	2100	Test disk for PVM, EFGVIEW and DVMUSI MODULEs, and PVMG LOADLIB
P684100E	401	9345 3390 3380 3375 3350	4 4 4 7 5	4800	600	Production disk for PVM server, also PVM user ID's 191 disk
P684100E	404	9345 3390 3380 3375 3350	5 5 5 8 7	6000	750	Test disk for CVIEW
P684100E	191	9345 3390 3380 3375 3350	25 21 25 40 32	30000	3750	P684100E user ID's 191 minidisk <b>VMSYS:P684100E.</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 3380 cylinder values in this table.
2. If you are not using CVIEW, then the P684100E 404 minidisk is not required. You must create a PPF override to remove this disk from the :DCL, :MDA, :RECINS, :RECSER, and :BLD sections of the PPF.
3. \*NONSFS in the SFS 4K block column means that disk cannot be installed to the shared file system and must remain a minidisk which will be defined in 6.1.2, "Allocate Resources for Installing PVM." on page 24.
4. The PVM and CVIEW server production code can be placed in an a shared file system. If this is desired, then replace the P684100E's 400, 401, 403, 404, and 405 minidisks with appropriate SFS directories. If the MPVM code on the P684100E 403 minidisk is placed in an SFS directory, then the MPVM EXEC will have to be modified, changing the link and access of PVM's 199 minidisk to the shared file directory chosen. The PVMG server production code located on P684100E's 402 minidisk cannot be placed on a shared file directory since GCS does not have support for SFS.

Figure 10 (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
MAINT	19E	9345	2	2400	300	Production disk for MPVM and PASSTHRU users for PVM
		3390	2			
		3380	2			
		3375	4			
		3350	3			

**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 3380 cylinder values in this table.
2. If you are not using CVIEW, then the P684100E 404 minidisk is not required. You must create a PPF override to remove this disk from the :DCL, :MDA, :RECINS, :RECSER, and :BLD sections of the PPF.
3. \*NONSFS in the SFS 4K block column means that disk cannot be installed to the shared file system and must remain a minidisk which will be defined in 6.1.2, "Allocate Resources for Installing PVM." on page 24.
4. The PVM and CVIEW server production code can be placed in an a shared file system. If this is desired, then replace the P684100E's 400, 401, 403, 404, and 405 minidisks with appropriate SFS directories. If the MPVM code on the P684100E 403 minidisk is placed in an SFS directory, then the MPVM EXEC will have to be modified, changing the link and access of PVM's 199 minidisk to the shared file directory chosen. The PVMG server production code located on P684100E's 402 minidisk cannot be placed on a shared file directory since GCS does not have support for SFS.

Figure 11 (Page 1 of 3). DASD Storage Requirements for (Optional) Target Minidisks

Minidisk owner (user ID)	Default Address	Storage in Cylinders		FB-512 Blocks	SFS 4K Blocks	Usage
		DASD	CYLS			
P684100E	2B1	9345 3390 3380 3375 3350	25 21 25 40 32	30000	3750	Contains base assemble, \$exec, and other optional source files <b>VMSYS:P684100E.PVM.SOURCE</b>
P684100E	502	9345 3390 3380 3375 3350	10 9 10 16 13	12000	1500	Contains Upper Case English help files for PVM <b>VMSYS:P684100E.PVM.HELPUCE</b>
P684100E	501	9345 3390 3380 3375 3350	10 9 10 16 13	12000	1500	Contains Kanji help files for PVM <b>VMSYS:P684100E.PVM.HELPMKAN</b>
P684100E	505	9345 3390 3380 3375 3350	10 9 10 16 13	12000	1500	Contains German help files for PVM <b>VMSYS:P684100E.PVM.HELPMGER</b>
P684100E	402	9345 3390 3380 3375 3350	2 2 2 4 3	2400	*NONSFS	Production disk for PVMG server, also PVMG user ID's 191 disk

**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 3380 cylinder values in this table.
2. \*NONSFS in the SFS 4K block column means that disk cannot be installed to the shared file system and must remain a minidisk which will be defined in 6.1.2, "Allocate Resources for Installing PVM." on page 24.
3. The PVM and CVIEW server production code can be placed in an a shared file system. If this is desired, then replace the P684100E's 400, 401, 403, 404, and 405 minidisks with appropriate SFS directories. If the MPVM code on the P684100E 403 minidisk is placed in an SFS directory, then the MPVM EXEC will have to be modified, changing the link and access of PVM's 199 minidisk to the shared file directory chosen. The PVMG server production code located on P684100E's 402 minidisk cannot be placed on a shared file directory since GCS does not have support for SFS.

Figure 11 (Page 2 of 3). DASD Storage Requirements for (Optional) Target Minidisks

Minidisk owner (user ID)	Default Address	Storage in Cylinders		FB-512 Blocks	SFS 4K Blocks	Usage
		DASD	CYLS			
P684100E	403	9345 3390 3380 3375 3350	4 4 4 7 5	4800	600	Production disk for MPVM users, also PVM user ID's 199 disk
P684100E	405	9345 3390 3380 3375 3350	5 5 5 8 7	6000	750	Production disk for CVIEW server, also CVIEW user ID's 191 disk
MAINT	193 493	9345 3390 3380 3375 3350	1 1 1 2 1	1200	150	Production disk containing IPCS/Dump Viewing Facility files for PVM
MAINT	19D	9345 3390 3380 3375 3350	10 9 10 16 13	12000	1500	Production disk containing American English help files for PVM
MAINT	402	9345 3390 3380 3375 3350	10 9 10 16 13	12000	1500	Production disk containing Upper Case English help files for PVM

**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 3380 cylinder values in this table.
2. \*NONSFS in the SFS 4K block column means that disk cannot be installed to the shared file system and must remain a minidisk which will be defined in 6.1.2, "Allocate Resources for Installing PVM." on page 24.
3. The PVM and CVIEW server production code can be placed in an a shared file system. If this is desired, then replace the P684100E's 400, 401, 403, 404, and 405 minidisks with appropriate SFS directories. If the MPVM code on the P684100E 403 minidisk is placed in an SFS directory, then the MPVM EXEC will have to be modified, changing the link and access of PVM's 199 minidisk to the shared file directory chosen. The PVMG server production code located on P684100E's 402 minidisk cannot be placed on a shared file directory since GCS does not have support for SFS.

Figure 11 (Page 3 of 3). DASD Storage Requirements for (Optional) Target Minidisks

Minidisk owner (user ID)	Default Address	Storage in Cylinders		FB-512 Blocks	SFS 4K Blocks	Usage
		DASD	CYLS			
MAINT	401	9345 3390 3380 3375 3350	10 9 10 16 13	12000	1500	Production disk containing Kanji help files for PVM
MAINT	405	9345 3390 3380 3375 3350	10 9 10 16 13	12000	1500	Production disk containing German help files for PVM

**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 3380 cylinder values in this table.
2. \*NONSFS in the SFS 4K block column means that disk cannot be installed to the shared file system and must remain a minidisk which will be defined in 6.1.2, "Allocate Resources for Installing PVM." on page 24.
3. The PVM and CVIEW server production code can be placed in an a shared file system. If this is desired, then replace the P684100E's 400, 401, 403, 404, and 405 minidisks with appropriate SFS directories. If the MPVM code on the P684100E 403 minidisk is placed in an SFS directory, then the MPVM EXEC will have to be modified, changing the link and access of PVM's 199 minidisk to the shared file directory chosen. The PVMG server production code located on P684100E's 402 minidisk cannot be placed on a shared file directory since GCS does not have support for SFS.

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## 5.3 Program Considerations

The following sections list the programming considerations for installing PVM and activating its functions.

### 5.3.1 Operating System Requirements

The following operating systems can be used to install PVM:

- VM/ESA Version 2 Release 1.0 (or higher)
- VM/ESA 1.1.5, 1.2.0, 1.2.1, or 1.2.2
- VM/ESA 1.1.1 + SPE APAR VM54804
- VM/ESA 1.1.0 370 feature + VMSES/E 370 Feature Prior Platform support feature (feature #7806)
- APAR VM57644, PTF UM25606 should be applied to VMSES/E for improved performance of VMFCOPY.
- VMSES/E APAR VM54997 should be applied to VM/ESA 1.2.0 only (this APAR is incorporated in the base of VM/ESA 1.1.5 and 1.2.1 and above).

### 5.3.2 Program Installation / Service Considerations

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

- 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 the 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 PVM strictly using the MAINT user ID, but will use a new user ID P684100E (which happens to be PVM 2.1.1's product ID, with P substituted for the 5). This is the IBM suggested user ID name. Customers are free to change this to any user ID name they wish. However, a PPF override must be created.

**Note:** It may be easier to make changes during the installation procedure 6.1.1, "Plan Your Installation For PVM" step 6 on page 22, then after you have installed this product.

- If you are going to install to minidisks you should keep in mind that the segments must be built from the installation user ID P684100E. If you want to build segments from a common user ID you will need to install PVM using the SFS system so that the common user ID can obtain access to the PVM code when building segments.
- RSU tapes will be supplied as necessary. Service between RSU tapes can be obtained via CORrective service. The PVM, DVMUSI and EFGVIEW MODULES, PVMG LOADLIB, and DVMMAC MACLIB files, and the files used by PVM to build the MODULES, LOADLIB, and MACLIB, will no longer be shipped on CORrective tapes. These files will be built by the customer using VMFBLD. The

EFGVSTUB and LOGONID modules used by MPVM and all CVIEW product files will be shipped on the PVM 2.1.1 product tape and serviced as full part replacements. The rest of the PVM 2.1.1 product will be a mixture of full part replacement and source updates for source maintained parts.

- The CVIEW function of PVM 2.1.1 will be installed and serviced using VMSES/E support, at the same time as PVM, off of the same product base or CORrective service tape. It will be installed directly to its own separate test minidisk. The installation will have you copy the contents of that disk to a production CVIEW disk.
- If you are migrating remote 3270 devices from CP owned in VM/SP, VM/SP HPO, or VM/ESA 370 (1.1.0 370 feature or 1.5.0) to PVM owned, please review the conversion information in Appendix F, "Defining Remote BSC Devices to PVM" on page 120 before continuing.

### 5.3.3 Required Service

If on a release of VM/ESA prior to 1.2.1, and if the MPVM component of PVM is required then:

- APAR VM55319 must be applied to CMS for building the EFGVIEW module.
- APAR VM54780 must be applied to CMS to obtain SVM.

### 5.3.4 Required Program Products / Components

If the PVMG gateway to VTAM or use of PVM's APPC line driver is required then the following products must be installed:

- VTAM (ACF/VTAM) Version 3 Release 2 (or higher)
- GCS component of VM/ESA.

If the use of PVM's TCP/IP line driver is required then the following products must be installed:

- IBM VM TCP/IP Version 2 Release 2 for VM (5735-FAL) or higher.

### 5.3.5 User ID Directory Information

User directory statements supplied in the 5684100E PRODPART file have user ID's that have privilege classes other than G. These privilege classes are required for the following reasons:

- The installing ID, P684100E, must have class E privilege for building the MPVM shared segment.
- The PVM virtual machine must have class B privilege for any of the following:
  - The configuration file (PVM CONFIG) contains a MSGNOH record, or
  - to allow warning messages to be issued to PVM users, or
  - The configuration file contains CLPORT records that specify target virtual machine identifications for remote printers. When PVM is started, it automatically issues an ATTACH to the virtual machine using the logical device address specified on the CLPORT record, or

- Telecommunication lines and local 3270 printers are attached by ATTACH statements in a PROFILE EXEC or issued from the PVM console. For remote 3270 printers not defined by the PVM CONFIG file, use NET ATTACH.
- The PVMG machine must have class B privilege if the configuration file (PVMG CONFIG) contains a MSGNOH record.
- The CVIEW machine must have class B privilege if you wish CVIEW to issue messages using MSGNOH.

The PVM user directory supplied in the 5684100E PRODPART, was set up with the following in mind:

- The REALTIMER option was intentionally omitted as it degrades performance.
- A dispatching priority of 50 was given to PVM rather than the default of 64. This was done to give PVM a slightly higher dispatch.

370 mode is required for the PVM and CVIEW virtual machines.

#### Important VM/ESA Version 2 Install Information!

CMS 12 provided with VM/ESA Version 2 no longer supports 370 mode virtual machines. The PVM and CVIEW servers will run on an ESA mode virtual machine using CP's 370 accomodation support. To turn this on, add the following line in the PROFILE EXEC for each server:

```
'CP SET 370ACCOM ON'
```

### 5.3.6 Special Program Installation Considerations for NLS

PVM 2.1.1 is shipped with mixed-case American English, uppercase American English, German, and Kanji message repository language files. They are also built into the PVM, EFGVIEW, and DVMUSI MODULEs and PVMG LOADLIB supplied on the product tape. The sample configuration files define mixed-case American English as the default national language. You can use the LANG configuration file record to automatically set the system national language. PVM users receive PVM messages, menus, and HELP panels in the system national language. Only American English help files are shipped on the PVM 2.1.1 product tape.

You can order other national language help files to install on your system. National languages (except American English) are distributed on separate national language feature tapes. The files on a national language feature tape contain translated information.

You install the national language feature tape files **after** you install the PVM product tape. Section 6.2.2, "Install NLS features" on page 32 steps you through the install. For further details on PVM national languages, review the "National Languages on Your PVM System" chapter in the *VM/Pass-Through Facility Administration and Operation* manual.

### 5.3.7 Available PVM 2.1.1 SPE's

The following SPE's are available for PVM 2.1.1:

- APAR VM57537

Provides a PVM peer to peer TCP/IP line driver. Publication describing this SPE is *VM/Pass-Through Facility TCP/IP Line Driver Support*, manual SC24-5710

- APAR VM57538

Provides the PVM SNA gateway facility (PVMG) for VM on a VSE guest, PVMG/VSE. This SPE is described in Appendix C, "PVMG/VSE SPE Overview" on page 103.

- APAR VM58551

Provides several enhancement's to the PVMG SNA gateway facility. For further details on this SPE, see Appendix E, "PVMG Enhancements provided in SPE VM58551" on page 113.

- APAR VM60644

Provides several enhancement's to the PVM server, including multiple session capability when DIALing PVM. For further details on this SPE, see Appendix G, "PVM Server Enhancements provided in SPE VM60644" on page 126.

- APAR VM61373

Provides enhancements to the PVM and CVIEW servers in support of expanded logical device addressing, enhancements to the screen handler within the DVMUSI MODULE, and the addition of an MPVMLINK EXEC exit point within the MPVM EXEC. For further details on this SPE, see Appendix H, "PVM Server Enhancements provided in SPE VM61373" on page 133.

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## 6.0 Installation Instructions

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

The step-by-step procedures are in a two column format. The steps to be performed are in bold large numbers. Commands for these steps are on the left hand side of the page in bold print. Additional information for a command may exist to the right of the command.

Each step of the installation instructions must be followed. Do not skip any step unless otherwise directed to. All instructions showing accessing of disks assumes the use of default minidisk addresses or SFS directories. If different minidisk addresses or SFS directory names are used, change the instructions appropriately.

### Note!

The sample console output presented throughout these instructions was produced on a VM/ESA 1.2.0 system. If you're installing PVM on a different VM/ESA system, the results obtained for some commands may differ from those depicted here.

---

## 6.1 VMSES/E Installation Process Overview

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

- Plan Your Installation

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

- Install the PVM Product

Use the VMFINS command to load the PVM 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 6.1.1, "Plan Your Installation For PVM" on page 21.

- Place the PVM Files into Production

Once the product files have been tailored and the operation of PVM is satisfactory, the product files are copied from the test BUILD disk(s) or directories to production BUILD disk(s) or directories.

For a complete description of all VMSES/E installation options refer to:

- *VMSES/E Introduction and Reference* manual

**OR**

- *VMSES/E 370 Feature Introduction and Reference for Licensed Products* manual, SC24-5659

### 6.1.1 Plan Your Installation For PVM

The VMFINS command will be used to plan the installation. This is a two step process that will:

- load the first tape file, containing VMSES/E PPF and PRODPART files
- generate a 'PLANINFO' file listing:
  - all user ID/mdisks requirements
  - required products

#### 1 Log on as the PVM installation planner.

This User ID can be any ID with read access to MAINT's 5E5 (or SESELPS EE5, if installing on VM/ESA 1.1.0 370 feature) and write access to MAINT's 51D minidisk (or SESELPS 51D, if installing on VM/ESA 1.1.0 370 feature)

#### 2 Mount the PVM installation tape and attach it to this User ID at virtual address 181. VMFINS requires the tape drive to be at virtual address 181.

#### 3 Establish read access to VMSES/E code.

**link maint 5e5 5e5 rr  
access 5e5 b**

**Note:** If installing on VM/ESA 1.1.0 370 feature link to **SESELPS** and access **EE5**.

The 5E5IEE5 disk is where VMSES/E resides.

#### 4 Establish write access to the Software Inventory disk.

**link maint 51d 51d mr  
access 51d d**

**Note:** If installing on VM/ESA 1.1.0 370 feature link to **SESELPS** and access **51D**.

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

**Note:** If another user already has the MAINT 51D minidisk (or SESELPS 51D for VM/ESA 1.1.0 370 Feature) linked in write mode (R/W), you'll only

obtain read access (R/O) to this minidisk. If this occurs, you'll 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 PVM specific files to the 51D disk.

### vmfins install info (nomemo)

The NOMEMO option will load the memos but will not issue a prompt to send them to the system printer. Use MEMO if you wish to be prompted for printing the memo.

This command will perform the following:

- Loads the Memo-to-Users
- Loads the product control files (PPF and PRODPART)
- Creates the VMFINS PRODLIST on your A-disk. The VMFINS PRODLIST contains a list of products on the installation tape.

```
VMFINS2760I VMFINS processing started
VMFINS1909I VMFINS PRODLIST created on your A-disk
VMFINS2760I VMFINS processing completed successfully
Ready;
```

## 6 Obtain resource planning information for PVM

### Notes:

- a. The product will not be loaded by the VMFINS command at this time.
- b. If this product is being installed on a VM/ESA 1.1.1 or VM/ESA 1.1.0 370 feature + VMSES/E for Licensed Programs feature you will need to use the **PROD** keyword instead of the **PPF** keyword if you wish to have the opportunity to change the installation defaults.

## vmfins install ppf 5684100E {PVMINS|PVMISFS} (plan nomemo)

Use **PVMINS** if installing using minidisks or **PVMISFS** if installing using SFS

The PLAN option indicates that you want VMFINS to perform requisite checking, plan system resources, and provide an opportunity to override the defaults in the product parameter file.

### You can override 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'll need to use your changed values instead of those indicated (when appropriate), throughout the rest of the installation instructions, as well as those provide for servicing PVM. For example, you'll need to specify your PPF override file name instead of 5684100E for certain VMSES/E commands. For more information about changing the VMSYS file pool name see Appendix D, "Overriding the VMSYS File Pool Name" on page 109
- 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. If you choose to make overrides, be sure they're filed on the 51D disk.

```
VMFINS2760I VMFINS processing started
VMFREQ2805I Product 5684100E component PVMINS passed requisite checking
Do you want to create an override for 5684100E PVMINS (prodid 5684100E)?
Enter 0 (No), 1 (Yes) or 2 (Exit)
0
VMFRMT2760I VMFRMT processing started
VMFRMT2760I VMFRMT processing completed successfully
VMFPLA1909I 5684100E PLANINFO created on your A-disk
VMFINS2760I VMFINS processing completed successfully
Ready;
```

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

## vmfview install

## 6.1.2 Allocate Resources for Installing PVM.

Use the planning information in the 5684100E PLANINFO file, created in the PLAN step, to:

- Create the following user ID directories if they do not already exist:
  - P684100E
  - PVM
  - PVMG
  - CVIEW
- Place the new directory on-line
  - 1** Obtain the user directory entries from the 5684100E PLANINFO file.

**Note:** The user directory entries are located at the bottom of the PLANINFO file. This will contain all of the necessary links and privilege classes for all of the user IDs.
  - 2** If you are using minidisks, add the MDISK statements to the directory entry for P684100E. Use Figure 10 on page 9 to obtain the minidisk requirements.
  - 3** If you are using SFS then you will need to do the following:
    - a** Determine the number of 4k blocks that are required for SFS directories. From the 5684100E PLANINFO file add up all of the 4k blocks for all of the SFS directories listed or add up all of the SFS Blocks in Figure 10 on page 9. This will give you the total number of 4k blocks that will be needed to install PVM. This information will be used when enrolling the P684100E user ID to the VMSYS filepool. Note that the P684100E 402 minidisk cannot be placed in an SFS directory.
    - b** Enroll user P684100E in the VMSYS filepool using the ENROLL USER P684100E VMSYS (BLOCKS *blocks* command, 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 VMSYS: filepool.
    - c** Determine if there are enough blocks available in the filepool to install PVM. 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 PVM you will need to add space to the filepool. See the *VM/ESA SFS and CRR Planning, Administration, and Operation* manual for information on adding space to a filepool.

**d** Create the necessary subdirectories listed in the 5684100E PLANINFO file using the CREATE DIRECTORY command.

**e** Create the necessary minidisks which cannot be placed into an SFS. These disks include the P684100E's 402 minidisk.

**Note:** This must be done from the installation user ID P684100E.

**f** If you intend to use an SFS directory as the work space for the P684100E used ID, include the following IPL control statement in the P684100E directory entry:

```
IPL CMS PARM FILEPOOL VMSYS
```

This will cause CMS to automatically access the P684100E's top directory as file mode A.

**4** If running on VM/ESA 1.1.0 370 feature or VM/ESA 1.1.5 then the following user directory changes must be made:

- For the PVM user directory
  - Delete the MACHINE 370 directory from the directory entry.
  - Add ECMODE BMX DIAG98 VCUNOSHR to the OPTION statement.

ECMODE is needed as PVM needs to run in extended control mode.

BMX allows I/O to occur as block multiplexer channel operations.

DIAG98 allows the use of the DIAGNOSE x'98' command.

VCUNOSHR allows devices to be supported using NONSHARED protocols for virtual I/O devices.
- For the PVMG user directory
  - Delete the NAMESAVE GCS statement from the directory entry.
  - Delete the MACHINE XA statement from the directory entry.
  - Add OPTION ECMODE to the directory entry prior to the CONSOLE statement.
  - Add LINK MAINT 0595 0595 RR with the other LINK statements.
- For the CVIEW user directory
  - Delete the MACHINE 370 statement from the directory entry.
  - Add OPTION ECMODE BMX VCUNOSHR prior to the CONSOLE statement.

- For the P684100E user directory
  - Change the link statements for the 5E5 (to SESELPS EE5) and 51D (to SESELPS 51D) minidisks for VM/ESA 1.1.0 370 feature only.
  - The storage size on the USER control statement must be changed to 16M 16M.
  - Delete the MACHINE XA statement from the directory entry.
  - Add OPTION ECMODE prior to the CONSOLE statement.

**5** Change passwords for the user ID's.

**6** Add all of the user ID directories to the user directory.

**7** Place the new directories on-line using VM/Directory Maintenance (DIRMAINT) or an equivalent CP directory maintenance method.

**Notes:**

- a. DIRMAINT 1.4 requires 80-byte fixed length directory entries. DirMaint 1.5 does not have this restriction.
- b. All minidisks for the P684100E user ID must be formatted before installing PVM.

### 6.1.3 Install PVM

The *ppfname* used throughout these instructions is **5684100E**, which assumes you are using the override PPF supplied by IBM for PVM. If you have your own PPF override file for PVM, you should use your file's *ppfname* instead of **5684100E**. The *ppfname* you use should be used **throughout** the rest of this procedure.

**1** Log on to the installation user ID **P684100E**.

**2** Create a PROFILE EXEC that will contain the access of MAINT's 5E5 and 51D minidisks.

```
xedit profile exec a
====> input /**/
====> input 'access 5e5 b'
====> input 'access 51d d'
====> file
```

**Note:** If you are installing on the VM/ESA 1.1.0 370 feature change 5e5 to **ee5**.

**3** Establish write access to the Software Inventory Disk if not linked R/W.

**Note:** If the MAINT 51D (SESELPS 51D for VM/ESA 1.1.0) 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**

**Note:** If you are installing on the VM/ESA 1.1.0 370 feature, change MAINT to **SESELPS**.

The MAINT 51D (SESELPS 51D for VM/ESA 1.1.0 370) disk is where the VMSES/E system level software inventory files reside.

**4** Execute the profile to access the 5E5 or EE5 and 51D disks.

**profile**

**5** Have the PVM installation tape mounted and attached to **P684100E** at virtual address 181. The VMFINS EXEC requires the tape drive to be at virtual address 181.

**6** Install PVM

**Notes:**

- a. If this product is being installed on a VM/ESA 1.1.1 or VM/ESA 1.1.0 370 feature + VMSES/E for Licensed Programs feature you will need to use the **PROD** keyword instead of the **PPF** keyword if you wish to have the opportunity to change the installation defaults.

If you've already created a PPF override file, you should specify your override file name after the **PPF** keyword for the following VMFINS command. The **PROD** keyword should *not* be used.

- b. You may be prompted for additional information during VMFINS INSTALL processing depending on your installation environment. If you are 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 5684100E {PVMINS|PVMISFS} (nomemo nolink**

Use **PVMINS** if installing using minidisks or **PVMISFS** if installing using SFS

The NOLINK option indicates that you don't need VMFINS to link to the appropriate minidisks, only access them if not accessed.

```

VMFINS2760I VMFINS processing started
VMFREQ2805I Product 5684100E component PVMINS passed requisite checking
Do you want to create an override for 5684100E PVMINS (prodid 5684100E)?
Enter 0 (No), 1 (Yes) or 2 (Exit)
0
VMFINT2760I VMFINST processing started
VMFLDP2706I 5684100E PVMINS (prodid 5684100E) will be processed as a PDI product
VMFSET2760I VMFSETUP processing started
VMFUTL2205I Minidisk|Directory Assignments:
      String      Mode  Stat  Vdev  Label/Directory
VMFUTL2205I LOCALSAM  E    R/W  2C2  P682C2
VMFUTL2205I APPLY      F    R/W  2A6  P682A6
VMFUTL2205I              G    R/W  2A2  P682A2
VMFUTL2205I DELTA      H    R/W  2D2  P682D2
VMFUTL2205I BUILD0     I    R/W  400  P68400
VMFUTL2205I BUILD4     J    R/W  404  P68404
VMFUTL2205I BUILD6     K    R/W  29D  P6829D
VMFUTL2205I BASE       L    R/W  2B2  P682B2
VMFUTL2205I -----  A    R/W  191  P68191
VMFUTL2205I -----  B    R/O  5E5  MNT5E5
VMFUTL2205I -----  D    R/W  51D  MNT51D
VMFUTL2205I -----  S    R/O  190  MNT190
VMFUTL2205I -----  Y/S  R/O  19E  MNT19E
VMFSET2760I VMFSETUP processing completed successfully
VMFREC2760I VMFREC processing started
VMFREC1852I Volume 1 of 1 of INS TAPE 9300
VMFREC1851I (1 of 9) VMFRCAXL processing AXLIST
VMFRCX2159I Loading n part(s) to DELTA 2D2 (H)
VMFREC1851I (2 of 9) VMFRCPTF processing PARTLST
:
VMFRCA2159I Loading part(s) to BUILD4 404 (J)
VMFRCA2159I Loaded n part(s) to BUILD4 404 (J)
VMFREC2760I VMFREC processing completed successfully
VMFINT2760I VMFINST processing completed successfully
VMFINS2760I VMFINS processing completed successfully
Ready;

```

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

## vmfview install

## 6.1.4 Load The Recommended Service Upgrade Tape

Included with PVM product tape is a special tape volume referred to as the IBM Recommended Service Upgrade Tape (RSU). This tape includes recommended service that was not included on the PVM product tape that should also be installed.

The *ppfname* used throughout these instructions is **5684100E**, which assumes you are using the override PPF supplied by IBM for PVM. If you have your own PPF override file for PVM, you should use your file's *ppfname* instead of **5684100E**. The *ppfname* you use should be used **throughout** the rest of this procedure.

- 1** Log on to the installation user ID **P684100E**.
- 2** Establish write access to the Software Inventory Disk if it is not already linked R/W.

**Note:** If the MAINT 51D (SESELPS 51D for VM/ESA 1.1.0) 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
```

**Note:** If you are installing on the VM/ESA 1.1.0 370 feature, change MAINT to **SESELPS**.

The MAINT 51D (SESELPS 51D for VM/ESA 1.1.0 370) disk is where the VMSES/E system level software inventory files reside.

- 3** Mount the RSU tape on the tape drive as virtual device 181. You must use 181.

**Note:** Make sure that the tape is write-protected.

- 4** Receive the documentation

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

```
vmfins install info (nomemo
```

- 5** Determine DASD sizes for disks to receive service:

In order to receive the service from the RSU tape, you need to have adequate space available on the alternate APPLY, DELTA, and BUILD disks. The required sizes are identified in the PVM documentation (5684100E MEMO D) received in the previous step.

**6** Enter the VMFINS command to load the contents of the RSU tape.

**vmfins install ppf 5684100E {PVMINS|PVMISFS} (nomemo nolink**

Refresh the PVM service disks by loading new service from the RSU tape.

Use **PVMINS** if installing using minidisks or **PVMISFS** if installing using SFS

The NOLINK option indicates that you don't need VMFINS to link to the appropriate minidisks, only access them if not accessed.

```
VMFINS2760I VMFINS processing started
VMFREQ2805I Product 5684100E component PVMINS passed requisite checking
Do you want to create an override for 5684100E PVMINS (prodid 5684100E)?
Enter 0 (No), 1 (Yes) or 2 (Exit)
0
VMFINT2760I VMFINST processing started
VMFLDP2706I 5684100E PVMINS (prodid 5684100E) will be processed as a PDI product
VMFSET2760I VMFSETUP processing started
VMFUTL2205I Minidisk|Directory Assignments:
          String      Mode  Stat  Vdev  Label/Directory
VMFUTL2205I LOCALSAM  E    R/W  2C2  P682C2
VMFUTL2205I APPLY      F    R/W  2A6  P682A6
VMFUTL2205I              G    R/W  2A2  P682A2
VMFUTL2205I DELTA      H    R/W  2D2  P682D2
VMFUTL2205I BUILD0     I    R/W  400  P68400
VMFUTL2205I BUILD4     J    R/W  404  P68404
VMFUTL2205I BUILD6     K    R/W  29D  P6829D
VMFUTL2205I BASE       L    R/W  2B2  P682B2
VMFUTL2205I -----  A    R/W  191  P68191
VMFUTL2205I -----  B    R/O  5E5  MNT5E5
VMFUTL2205I -----  D    R/W  51D  MNT51D
VMFUTL2205I -----  S    R/O  190  MNT190
VMFUTL2205I -----  Y/S  R/O  19E  MNT19E
VMFSET2760I VMFSETUP processing completed successfully
VMFREC2760I VMFREC processing started
VMFREC1852I Volume 1 of 1 of INS TAPE yynn
:
VMFREC2760I VMFREC processing completed successfully
VMFINT2760I VMFINST processing completed successfully
VMFINS2760I VMFINS processing completed successfully
Ready;
```

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

**vmfview install**

---

## 6.2 Optional Installation Steps

This section describes optional install steps that include uppercase English help files, optional source, NLS features, and local modifications.

If you plan on doing any of the following:

- 6.2.1, "Install Uppercase English Help Files"
- 6.2.2, "Install NLS features"
- 6.2.3, "Install Optional Source Files"
- 6.2.4, "Local Modifications to PVM"

Then continue with all applicable steps. Otherwise continue with 6.3, "Update Build Status Table for PVM."

### 6.2.1 Install Uppercase English Help Files

- 1 Get the 502 minidisk or SFS requirements from Figure 11 on page 13. Add the minidisk to the P684100E user ID directory and place the directory on-line.
- 2 Format the disk, or create the VMSYS:P684100E.PVM.HELPUCE directory.
- 3 Create Uppercase English files from American English Help Files

**a** If installing using minidisks

**access 29d e**

**access 502 f**

**vmfcopy \* \* e = f (prodid 5684100E%PVM olddate replace upcase**

**b** If installing using SFS

**access VMSYS:P684100E.PVM.HELPUCE e**

**access VMSYS:P684100E.PVM.HELPUCE f**

**vmfcopy \* \* e = f (prodid 5684100E%PVM upcase replace olddate**

**4** Place Uppercase English Help Files into Production from P684100E's 502 disk to Maint's 402 disk

**a** Log on to **MAINT**

This step has to be done from the MAINT user ID

**b** Copy the uppercase help files to the MAINT 402 minidisk.

**1** If installing using minidisks

```
link P684100E 502 addr rr          addr is any free disk address on the MAINT user
access addr e                      ID
access 402 f
vmfcopy ** e = f (prodid 5684100E%PVM replace olddate
```

**2** If installing using SFS

```
access VMSYS:P684100E.PVM.HELPUCE e
access 402 f
vmfcopy ** e = f (prodid 5684100E%PVM replace olddate
```

## 6.2.2 Install NLS features

PVM's NLS features will be installed through VMSES/E support using the same user ID, P684100E, as the base. Kanji and German languages are already built into the PVM, DVMUSI, and EFGVIEW MODULES, and the PVMG LOADLIB. Only the help files are shipped on the NLS feature tapes. If the help files are desired then follow the steps in this section.

**Note:** The install steps have to be repeated for each NLS feature you are installing.

- 1** Get the minidisk, 501 for Kanji or 505 for German, or SFS requirements from Figure 11 on page 13. Add the minidisk to the P684100E user ID directory and place the directory on-line.
- 2** Format the disk, or create the VMSYS:P684100E.PVM.HELPKAN (for Kanji) or VMSYS:P684100E.PVM.HELPGER (for German) directory.
- 3** Have the NLS Feature installation tape mounted and attached to **P684100E** at virtual address 181.

## 4 Install NLS Feature

**vmfins install ppf *ppfname* {PVMINS|PVMISFS} (nomemo nolink**

Use **PVMINS** if installing using minidisks or  
**PVMISFS** if installing using SFS

Use the table below to obtain the value for  
***ppfname***:

*Figure 12. NLS PPF Names*

<b>NLS Feature</b>	<b>PPFNAME</b>
Kanji	5684100F
German	5684100G

## 5 Place NLS Help Files into Production

### a Log on to MAINT

This step has to be done from the MAINT user ID

### b If installing the Kanji feature, copy files from P684100E's 501 to Maint's 401

#### 1 If installing using minidisks

```
link P684100E 501 addr rr                                addr is any free disk address on the MAINT user
access addr e                                           ID
access 401 f
vmfcopy * * e = = f (prodid 5684100F%PVM replace olddate
```

#### 2 If installing using SFS

```
access VMSYS:P684100E.PVM.HELPKAN e
access 401 f
vmfcopy * * e = = f (prodid 5684100F%PVM replace olddate
```

- C** If installing the German feature, copy files from P684100E's 505 to Maint's 405

**1** If installing using minidisks

```
link P684100E 505 addr rr          addr is any free disk address on the MAINT user
access addr e                    ID
access 405 f
vmfcopy ** e = = f (prodid 5684100G%PVM replace olddate
```

**2** If installing using SFS

```
access VMSYS:P684100E.PVM.HELPER e
access 405 f
vmfcopy ** e = = f (prodid 5684100G%PVM replace olddate
```

## 6.2.3 Install Optional Source Files

- 1** Get the 2B1 minidisk or SFS requirements from Figure 11 on page 13. Add the minidisk to the P684100E user ID directory and place the directory on-line.
- 2** Format the disk, or create the VMSYS:P684100E.PVM.SOURCE directory.
- 3** Have the installation tape mounted and attached to **P684100E** at virtual address 181.
- 4** Install Optional Source Using VMFINS

```
vmfins install ppf 5684100E {PVMSRC|PVMSSFS} (nomemo nolink
```

Use **PVMSRC** if installing using minidisks or **PVMSSFS** if installing using SFS.

## 6.2.4 Local Modifications to PVM

If any local modifications to PVM are needed, at this time, refer to chapter 7 in the *VM/ESA Service Guide*. Follow the steps that are applicable to your local modification.

The following substitutions need to be made in the service guide when doing local modifications to PVM:

- **esalcl** should be **5684100E**
- **esa** should be **5684100E**

- *compname* should be **PVMSRC** or **PVMSSFS** (minidisk or SFS) if modifying any part on the 2B3 minidisk or directory, otherwise use **PVM** or **PVMSFS** (minidisk or SFS) for modifying any part on the 2B2 minidisk or directory.
- *appid* should be **5684100E**
- *fm-local* should be the fm of 2C2
- *fm-applyalt* should be the fm of 2A6

A couple of things that you need to keep in mind are:

- The "Compile National Language Files" section is not applicable to PVM. See the PVMCMP command in the "PVM Commands" appendix and review the "National Languages on Your PVM System" chapter in the *VM/Pass-Through Facility Administration and Operation* manual.
- When you get to the "Rebuilding Objects" step in the *Service Guide* you should return back to this program directory at 6.3, "Update Build Status Table for PVM."

**Notes:**

1. There is a local modification assemble file example in Appendix B, "Local Modification Example: Assemble File" on page 100.
2. If you are running VM/ESA 1.1.0 370 feature you still need to refer to the *Service Guide* for VM/ESA 1.1.1 or higher.

---

## 6.3 Update Build Status Table for PVM

### 1 Update the VM SYSBLDS software inventory file for PVM

**vmfins build ppf 5684100E {PVMINS|PVMISFS} (serviced nolink**

Use **PVMINS** if installing using minidisks or **PVMISFS** if installing using SFS

The SERVICED option will build any parts that were not built on the installation tape (if any) and update the software inventory build status table showing that 5684100E has been built.

## Note

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

```
VMFBLD2760I VMFBLD processing started
VMFBLD1851I Reading build lists
VMFBLD2182I Identifying new build requirements
VMFBLD2185R The following source product parameter files have been
serviced:
VMFBLD2185R 5684100E $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 5684100E $PPF on 191 (A) from level $PFnnnnn
```

```
vmfppf 5684100E {PVMINSIPVMISFS}
vmfppf 5684100E {PVMIPVMSFS}
```

Use **PVMINS** and **PVM** if installing using minidisks or **PVMISFS** and **PVMSFS** if installing using SFS

**Note:** If you've created your own PPF override then use your PPF name instead of 5684100E.

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

```
copy 5684100E $ppf a = = d (olddate replace
erase 5684100E $ppf a
```

**Note:** **Do not** use your own PPF name in place of 5684100E for the COPY and ERASE commands.

```
vmfins build ppf 5684100E {PVMINSIPVMISFS} (serviced nolink
```

**1**

This will complete updating the build status table. When you receive the prompt that was previously displayed, enter a 1 to continue.

---

## 6.4 Post Installation

This section is required. You will initialize the server machines minidisks with PVM code. Additionally you will tailor the server machines for your operating environment.

### 6.4.1 Copy the Server Code to the Server Minidisks

This step will be accomplished by using the IN2PROD EXEC. To find out more information on the IN2PROD EXEC issue `in2prod {?!help}` after accessing the 400 disk.

- 1 Log on to P684100E, if you are not already logged on to it.
- 2 Access the disk where the IN2PROD EXEC resides

`access 400 e`

If you are planning on using any combination of PVM, PVMG, MPVM or CVEIW, but not all, continue with step 3 and select the applicable steps. Otherwise, issue the following command:

`in2prod all`

**Note:** Not all CVIEW files exist at this time since the tailoring steps are still to be completed. See step 6 on page 38 for further CVIEW tailoring details.

**Note:** For processing the PVMG/VSE files, see Appendix C, “PVMG/VSE SPE Overview” on page 103.

and continue with 6.4.2, “Tailor the PVM Server Machines (Initial Installation)” on page 38, if you are installing PVM for the first time. Otherwise, proceed with 6.4.3, “Tailor the PVM Server Machines (Migration)” on page 45 to keep your previously tailored files for PVM.

- 3 If you are using PVM, copy server code to P684100E's 401 disk

`in2prod pvm`

**Note:** The PVM server machine links to the 401 disk as it's 191.

- 4 If you are using PVMG, copy server code to P684100E's 402 disk

`in2prod pvmg`

**Note:** The PVMG server machine links to the 402 disk as it's 191.

**5** If you are using MPVM, copy code to P684100E's 403 disk

**in2prod mpvm**

**Note:** MPVM users link to the 403 disk as PVM's 199 disk.

**6** Copying CVIEW code from the 404 test minidisk to the 405 production minidisk will be done in 6.4.2.3, "Tailor the CVIEW Virtual Machine" on page 40 for initial installation, or 6.4.3.3, "Tailor the CVIEW Virtual Machine" on page 48 for migration.

## 6.4.2 Tailor the PVM Server Machines (Initial Installation)

If you are installing PVM for the first time you will copy and tailor sample files for each program that you will be using.

Select any or all of the following based on the functions that you will be using:

- 6.4.2.1, "Tailor the PVM Virtual Machine"
- 6.4.2.2, "Tailor the MPVM Files" on page 39
- 6.4.2.3, "Tailor the CVIEW Virtual Machine" on page 40
- 6.4.2.4, "Tailor the PVMG Server Virtual Machine" on page 42

### 6.4.2.1 Tailor the PVM Virtual Machine

**1** Log on to P684100E if you are not already logged on to it.

**2** Access the LOCALSAM disk (2C2).

**access 2c2 t**

The sample files were loaded to the 2C2 minidisk.

**3** Access the 401 minidisk.

**access 401 u**

The P684100E 401 minidisk is PVM's 191 minidisk.

**4** Copy the sample files to the 401 minidisk.

```
vmfcopy pvm confsamp t = config u (prodid 5684100E%PVM olddate replace
vmfcopy profile pvmsamp t = pvm u (prodid 5684100E%PVM olddate replace
vmfcopy profpvm execsamp t profile exec u (prodid 5684100E%PVM olddate replace
vmfcopy ucomdir namesamp t = names u (prodid 5684100E%PVM olddate replace
```

**5** Tailor each of the files that you just copied. See "Defining Your PVM Configuration" of the *VM/Pass-Through Facility Administration and Operation* manual for details on configuring these files.

**6** Tailor the REMOTE AUTH file.

VM/Pass-Through Facility now contains the Access Security Exits in the PVM module that was supplied on the installation tape, therefore, you will need to create this file even if you will not be using these exits.

**Important Information on the REMOTE AUTH File**

Even if you will not be using the Access Security Exits provided with PVM, a REMOTE AUTH file is necessary. When PVM tries to establish a session, the request will be rejected if the REMOTE AUTH file does not exist and has been read by the exits. If use of these exits are not desired, create a REMOTE AUTH file with a comment line.

The REMOTE AUTH file can be used to limit availability of the PVM network by user ID, terminal ID, and node ID (originating and destination) for selected users.

**a** Create the REMOTE AUTH file.

**xedit filename auth u**

*filename* is the name of your PVM local node or REMOTE if you choose not to use your PVM local node.

**b** Make any desired changes. See the Appendix "PVM Access Security Exits" in the *VM/Pass-Through Facility Administration and Operation* manual for details on these exits.

**c** File your changes.

====> file

### 6.4.2.2 Tailor the MPVM Files

**1** Log on to P684100E if you are not already logged on to it.

**2** Access the LOCALSAM disk (2C2)

**access 2c2 t**

The sample files were loaded to the 2C2 minidisk.

**3** Access 403 minidisk.

**access 403 u**

The P684100E 403 minidisk is PVM's 199 minidisk.

**4** Copy the sample files to the 403 minidisk.

**vmfcopy mpvmsys namesamp t = names u (prodid 5684100E%PVM olddate replace**  
**vmfcopy mpvm namesamp t = names u (prodid 5684100E%PVM olddate replace**  
**vmfcopy mpvmsgns namesamp t = names u (prodid 5684100E%PVM olddate replace**

**5** Make any desired changes to these files. See the following for further details:

- "Developing NAMES Files for MPVM" in the *VM/Pass-Through Facility Administration and Operation* manual for details on modifying the names files.
- "Getting Started Using MPVMSGN" in the *VM/Pass-Through Auto-Signon Reference* manual for details on modifying the auto-signon names file.

### 6.4.2.3 Tailor the CVIEW Virtual Machine

**1** Log on to P684100E if you are not already logged onto it.

VM/ESA 1.1.0 ESA feature, VM/ESA 1.1.1 and later systems only

The DXGINIT EXEC will only run in a 370 mode virtual machine. In order to process the CVIEW menu files on a system **other than** VM/ESA 1.1.0 370 feature or VM/ESA 1.1.5, you will either need to switch to a 370 mode virtual machine or turn on CP's 370 accomodation depending on the VM/ESA Version you are installing PVM on.

**a** If on VM/ESA Version 1

**set machine 370**

**ipl cms**

IPL CMS to reset your virtual machine.

**b** If on VM/ESA Version 2

**set 370accom on**

End of VM/ESA 1.1.0 ESA feature, VM/ESA 1.1.1 and later systems only

**2** Access the 404 minidisk.

**access 404 a**

The P684100E 404 minidisk is CVIEW's test 191 minidisk.

**3** Tailor the CONSULT IDNAME file.

See "Customizing - CVIEW" in the *VM/Pass-Through Facility Administration and Operation* manual for details on modifying this file.

**4** Run the DXGINIT EXEC to create the SAVEPAN files needed by CVIEW.

**dxginit**

The DXGINIT EXEC will prompt you for additional information to customize the CVIEW server machine. You should answer the prompts according to how you want to set up your CVIEW environment.

**Note:** Do not run the DXGCVIEW EXEC at this time.

For further details about this command see the *VM/Pass-Through Facility Administration and Operation* manual.

**5** Create the PROFILE EXEC for CVIEW.

**vmfcopy dxgprof exec a profile = = (prodid 5684100E%PVM olddate replace**

The DXGPROF EXEC is a sample profile exec provided by PVM. You should not have to tailor this file.

**6** Copy server code to P684100E's 405 disk

**acc 400 e  
in2prod cview**

**Note:** The CVIEW server machine links to the 405 disk as it's 191. All CVIEW files should now exist.

VM/ESA 1.1.0 ESA feature, VM/ESA 1.1.1 and later systems only

**a** If on VM/ESA Version 1

**set machine xa**

**ipl cms**

IPL CMS to restore the machine environment to XA.

**b** If on VM/ESA Version 2

**set 370accom off**

End of VM/ESA 1.1.0 ESA feature, VM/ESA 1.1.1 and later systems only

#### 6.4.2.4 Tailor the PVMG Server Virtual Machine

**1** Log on to P684100E if you are not already logged onto it.

**2** Access the LOCALSAM disk (2C2).

**access 2c2 t**

The 2C2 minidisk contains the samples that need to be copied to the 402 minidisk.

**3** Access the 402 minidisk.

**access 402 u**

The 402 minidisk is PVMG's 191 minidisk.

**4** Copy the sample files to the 402 minidisk.

**vmfcopy pvmg confsamp t = config u (prodid 5684100E%PVM olddate replace**  
**vmfcopy profile gcssamp t = gcs u (prodid 5684100E%PVM olddate replace**

**5** Tailor the sample files that were just copied.

See "Defining Your PVMG Configuration" in the *VM/Pass-Through Facility Administration and Operation* manual for details on modifying these files.

**6** Ensure that the PVMG user ID is defined to GCS.

The PVMG server virtual machine must be configured as an authorized member of a VM Group Control System (GCS) group that runs VTAM.

For more information on how to authorize the PVMG user ID as a member of the GCS group that runs VTAM, see the *VM/ESA: Group Control System Reference* and the *VM/ESA Group Control System Reference for 370*.

## 7 Define the VTAM configuration for PVMG.

The PVMG server virtual machine runs as a VTAM application. PVMG must be varied on every time VTAM is initialized. In this step you need to choose if you want to vary the PVMG resource definition on-line either automatically or dynamically.

- a** If you prefer AUTOMATIC varying of PVMG (during initialization of VTAM), do the following:

**Note:** The next time VTAM is initialized, it will read the following file and automatically VARY on the PVMG resource.

```
link maint 298 addr w
access addr mode
xedit atconnn vtamlst
```

**Note:** This step still assumes that VTAM links to the MAINT 298 minidisk as its 191 minidisk; your installation may use a different address for VTAM's 191.

where *addr* is the address assigned to P684100E's virtual machine

*mode* is any free filemode.

where *nn* is an installation-dependent number

- b** Add the PVMG VTAM applid to the list of existing resource names in ATCCONnn VTAMLST and then file it.

Refer to the *VTAM Network Implementation Guide* and the *VTAM Resource Definition Reference* manuals for more information on VTAM configuration lists.

### What's Next?

Proceed with step 8 on page 44 to tailor PVMG VTAMLST.

- c** If you prefer DYNAMIC varying of PVMG, do the following:

```
vtam vary net,act,id=pvmg
```

Where *pvmg* is the resource definition.

This command needs to be issued from the VTAM operator console.

## 8 Tailor the APPL statements in the PVMG VTAMLST file

The supplied PVMG VTAMLST file, which is installed on P684100E's 2C2 minidisk, contains the VTAM network resource definitions for PVMG. The resources PVMG is concerned with are:

- Terminals which are allowed to use PVMG. VTAM sees these terminals as logical unit (LU) names. These terminal (LU) names are shown as labels on the APPL statements and as values for the ACBNAME= parameter.
- The *application major node table* for PVMG application, which must be activated by VTAM startup. This mode table is shown as a value for the MODETAB=parameter.

Use the following steps to tailor PVMG VTAMLST.

Refer to the *VTAM Network Implementation Guide* and the *VTAM Resource Definition Reference* manuals for more information on tailoring in VTAM.

**a** Copy the sample PVMG VTAMLST file to MAINT's 298 minidisk

```
link maint 298 298 mr
```

```
access 2c2 e
```

```
access 298 f
```

```
access 400 g
```

```
vmfcopy pvmg vtamlst e = f (prodid 5684100E%PVM olddate replace
```

```
vmfcopy snamodet * g = f (prodid 5684100E%PVM olddate replace
```

**b** For the first APPL statement, the value on the label and ACBNAME= parameter must match the LOCAL record definition in the PVMG configuration file.

For example,

```
ACBNAME=N2ECAPV2
```

**c** The value on the label and the ACBNAME= parameter for each subsequent APPL statements must be within the LU range that you specify on the LU definitions in the PVMG configuration file.

The ACB definitions start with N2ECAP01 and are in numeric sequence up to the highest number of PVM sessions *through SNA* you wish to support. As distributed, the PVMG VTAMLST file has ACB name definitions that run from N2ECAP01 through N2ECAP20, allowing a maximum of 20 SNA sessions.

**d** The MODETAB= parameter points to the mode table filename which is a table of session parameters. The SNAMODET ASSEMBLE file (on

MAINT's 298 minidisk) is distributed as a sample mode table on the PVM product tape. The file contains definitions for your terminal types.

If you do not wish to use the supplied samples, edit the SNAMODET ASSEMBLE file and assemble it. Next append this file to an existing file that has been globally defined (GLOBAL command) on VTAM's search order or build your own one-member TXTLIB and GLOBAL that is defined into VTAM's search order.

#### What's Next?

You have now finished tailoring the PVM virtual machines. Continue with Appendix A, "Test the Installation/Service for PVM" on page 87. You will return to 6.5, "Place PVM Into Production" to place the new PVM code into production.

### 6.4.3 Tailor the PVM Server Machines (Migration)

If you are migrating from a previous release of PVM you will copy your tailored files to the new server machines 191 minidisks. The tailored files for PVM are upwardly compatible with PVM 2.1.1.

Select any or all of the following based on the functions that you will be using:

- 6.4.3.1, "Tailor the PVM Virtual Machine"
- 6.4.3.2, "Tailor the MPVM Files" on page 47
- 6.4.3.3, "Tailor the CVIEW Virtual Machine" on page 48
- 6.4.3.4, "Tailor the PVMG Server Virtual Machine" on page 49

#### 6.4.3.1 Tailor the PVM Virtual Machine

- 1** Log on to P684100E if you are not already logged onto it.
- 2** Access the current production disk that contains your tailored files for PVM. MAINT's 36E minidisk contains these files.

**link maint 36e 36e rr**  
**access 36e t**

- 3** Access the 401 minidisk.

**access 401 u**

The P684100E 401 minidisk is PVM's 191 minidisk.

#### 4 Copy your tailored files to the 401 minidisk.

**Note:** If you have tailored more than the files listed below then you will also need to copy them to the 401 minidisk.

```
vmfcopy pvm config t = = u (prodid 5684100E%PVM olddate replace
vmfcopy profile pvm t = = u (prodid 5684100E%PVM olddate replace
vmfcopy profile exec t = = u (prodid 5684100E%PVM olddate replace
vmfcopy ucomdir names t = = u (prodid 5684100E%PVM olddate replace
```

A return code of 28 indicates that you are not using an APPC connection and can be ignored.

```
vmfcopy filename auth t = = u (prodid 5684100E%PVM olddate replace
```

*filename* is the file name of your REMOTE AUTH file. Use the name of your PVM local node if you created this file using that name. Otherwise the file name is REMOTE.

**Note:** If you got a rc=28 from the vmfcopy of the REMOTE AUTH file continue with step 5 to create the REMOTE AUTH file. Otherwise continue with 6.4.3.2, "Tailor the MPVM Files" on page 47.

#### 5 Create the REMOTE AUTH file.

VM/Pass-Through Facility now contains the Access Security Exits in the PVM module that was supplied on the installation tape.

##### Important Information on the REMOTE AUTH File

Even if you will not be using the Access Security Exits provided with PVM, a REMOTE AUTH file is necessary. When PVM tries to establish a session, the request will be rejected if the REMOTE AUTH file does not exist and has been read by the exits. If use of these exits are not desired, create a REMOTE AUTH file with a comment line.

The REMOTE AUTH file can be used to limit availability of the PVM network by user ID, terminal ID, and node ID (originating and destination) for selected users.

##### a Create the REMOTE AUTH file.

```
xedit filename auth u
```

*filename* is the name of your PVM local node or REMOTE if you choose not to use your PVM local node.

- b** Make any desired changes. See the Appendix "PVM Access Security Exits" in the *VM/Pass-Through Facility Administration and Operation* manual for details on these exits.
- c** File your changes.

====> file

### 6.4.3.2 Tailor the MPVM Files

- 1** Log on to P684100E if you are not already logged onto it.
- 2** Access the current production disk that contains your tailored files for MPVM. MAINT's 38F minidisk contains these files.

link maint 38F 38F rr  
access 38F t

- 3** Access the 403 minidisk.

access 403 u

The P684100E 403 minidisk is PVM's 199 minidisk.

- 4** Access the 2C2 minidisk.

access 2C2 v

The P684100E 2C2 minidisk contains the sample names file for the auto-signon function.

- 5** Copy your tailored files to the 403 minidisk.

**Note:** If you have tailored more than the files listed below then you will also need to copy them to the 403 minidisk. If you have created any MPVM macros you should copy them to the 403 minidisk.

vmfcopy mpvmsys names t = = u (prodid 5684100E%PVM olddate replace  
vmfcopy mpvm names t = = u (prodid 5684100E%PVM olddate replace  
vmfcopy mpvmsgns namesamp v = names u (prodid 5684100E%PVM olddate replace

- 6** Make any desired changes to these files. See the following for further details:
  - "Developing NAMES Files for MPVM" in the *VM/Pass-Through Facility Administration and Operation* manual for details on modifying the names files.
  - "Getting Started Using MPVMSGN" in the *VM/Pass-Through Auto-Signon Reference* manual for details on modifying the auto-signon names file.

### 6.4.3.3 Tailor the CVIEW Virtual Machine

**1** Log on to P684100E if you are not already logged onto it.

VM/ESA 1.1.0 ESA feature, VM/ESA 1.1.1 and later systems only

The DXGINIT EXEC will only run in a 370 mode virtual machine. In order to process the CVIEW menu files on a system **other than** VM/ESA 1.1.0 370 feature or VM/ESA 1.1.5, you will either need to switch to a 370 mode virtual machine or turn on CP's 370 accomodation depending on the VM/ESA Version you are installing PVM on.

**a** If on VM/ESA Version 1

**set machine 370**

**ipl cms**

IPL CMS to reset your virtual machine.

**b** If on VM/ESA Version 2

**set 370accom on**

End of VM/ESA 1.1.0 ESA feature, VM/ESA 1.1.1 and later systems only

**2** Access the 404 minidisk.

**access 404 a**

The P684100E 404 minidisk is CVIEW's test 191 minidisk. This disk must be accessed as A so that you can run the DXGINIT EXEC.

**3** Access the current production disk that contains your tailored files for CVIEW. CVIEW's 191 minidisk contains these files.

**link cview 191 addr rr**  
**access addr t**

*addr* is any free virtual address.

**4** Copy your tailored files to the 404 minidisk.

**vmfcopy consult idname t = a (prodid 5684100E%PVM olddate replace**  
**vmfcopy profile exec t = a (prodid 5684100E%PVM olddate replace**

**5** Run the DXGINIT EXEC to create the SAVEPAN files needed by CVIEW.

**dxginit**

The DXGINIT EXEC will prompt you for additional information to customize the CVIEW server machine. You should answer the prompts according to how you want to set up your CVIEW environment.

**Note:** Do not run the DXGCVIEW EXEC at this time.

For further details about this command see the *VM/Pass-Through Facility Administration and Operation* manual.

**6** Copy server code to P684100E's 405 disk

**acc 400 e**  
**in2prod cview**

**Note:** The CVIEW server machine links to the 405 disk as it's 191. All CVIEW files should now exist.

VM/ESA 1.1.0 ESA feature, VM/ESA 1.1.1 and later systems only

**a** If on VM/ESA Version 1

**set machine xa**

**ipl cms**

IPL CMS to restore the machine environment to XA.

**b** If on VM/ESA Version 2

**set 370accom off**

End of VM/ESA 1.1.0 ESA feature, VM/ESA 1.1.1 and later systems only

#### 6.4.3.4 Tailor the PVMG Server Virtual Machine

**1** Log on to the P684100E if you are not already logged onto it.

**2** Access the current production disk that contains your tailored files for PVMG.

**link maint 38e addr rr**  
**access addr t**

*addr* is any free virtual address.

**3** Access the 402 minidisk.

**access 402 u**

The 402 minidisk is PVMG's 191 minidisk.

**4** Copy your tailored files to the 402 minidisk.

**vmfcopy pvmg config t = = u (prodid 5684100E%PVM olddate replace**  
**vmfcopy profile exec t = = u (prodid 5684100E%PVM olddate replace**  
**vmfcopy profile gcs t = = u (prodid 5684100E%PVM olddate replace**

#### What's next?

You have now finished tailoring the PVM virtual machine. Continue with Appendix A, "Test the Installation/Service for PVM" on page 87. You will return to 6.5, "Place PVM Into Production" to place the new PVM code into production.

---

## 6.5 Place PVM Into Production

You now will need to copy the PVM code to the MAINT 19E minidisk to make it available to all users.

If you are migrating from a previous release of PVM proceed with 6.5.1, "Change LINK statements for PVM, PVMG, CVIEW (Migration)" to change the directory statements of the server machines so that they point to the new PVM 2.1.1 code. Otherwise, continue with 6.5.2, "Copy PVM to the MAINT 19E Minidisk for Production" on page 51.

### 6.5.1 Change LINK statements for PVM, PVMG, CVIEW (Migration)

Select any of the following based on the programs that you are using:

- Update the user directory entry for PVM.
  - Change the LINK MAINT 36E 191 MR statement to LINK P684100E 401 191 MR.  
The PVM 191 minidisk is now P684100E's 401 minidisk.
  - Change the LINK MAINT 38F 191 RR statement to LINK P684100E 403 199 RR.

- Update the user directory entry for PVMG.
  - Change the LINK MAINT 38E 191 MR statement to LINK P684100E 402 191 MR.  
The PVMG 191 minidisk is now P684100E's 402 minidisk.
- Update the user directory entry for CVIEW.
  - Add the link statement LINK P684100E 405 191 MR.  
The CVIEW 191 minidisk is now P684100E's 405 minidisk.
  - Delete the MDISK statement for the CVIEW 191 minidisk as it is no longer needed.
- When you feel confident enough to do so, reclaim MAINT's minidisks that were used for your previous level of PVM since they are no longer needed. You can remove the following minidisks from the MAINT user ID.
  - 49E** Previously used as base minidisk
  - 39E** Previously used as product source files minidisk
  - 38F** Previously used for MPVM code.
  - 38E** Previously used for PVMG 191 minidisk.
  - 36E** Previously used for the PVM 191 minidisk.
  - 29E** Previously used as service minidisk
- Place the updated directories on-line using VM/Directory Maintenance (DIRMAINT) or an equivalent CP directory maintenance method.

## 6.5.2 Copy PVM to the 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 from P684100E's 400 disk to Maint's 19e disk

```
link P684100E 400 addr rr          addr is any free disk address on the MAINT user
access addr e                    ID
access 19E f
vmfcopy dvmusi * e = = f (prodid 5684100E%PVM olddate replace
vmfcopy mpvm exec e = = f (prodid 5684100E%PVM olddate replace
vmfcopy passthru exec e = = f (prodid 5684100E%PVM olddate replace
```

**Notes:**

1. MPVM and PASSTHRU users require files placed on the 19E disk.
2. Re-save the CMS saved system, to return the Y-disk (product code or MAINT's 19E disk) to 'shared' status. See the 'Placing (Serviced) Components into Production' section of the *VM/ESA Service Guide* for detailed information about how to save the CMS saved system.

- 3** Copy IPCS/Dump Viewing Facility TEXT code from P684100E's 400 disk to Maint's 193 and 493 disk.

**access** *addr* **e**

**access** 193 **f**

**vmfcopy help pvm e = = f (prodid 5684100E%PVM olddate replace**

**vmfcopy \* text e = = f (prodid 5684100E%PVM olddate replace**

*addr* is the same free MAINT address used in step 2 above

**Notes:**

1. IPCS/Dump Viewing facilities for PVM require the 193 disk.
2. The HELP PVM file contains help information on IPCS/DVF subcommands provided by PVM which may be useful when examining system abend dumps produced by the PVM server.

**access** 493 **f**

**vmfcopy help pvm e = = f (prodid 5684100E%PVM olddate replace**

**vmfcopy \* text e = = f (prodid 5684100E%PVM olddate replace**

- 4** Copy help files from P684100E's 29D disk to Maint's 19D disk

**a** If servicing using minidisks

**link** P684100E 29d *addr2* **rr**

**access** *addr2* **e**

**access** 19d **f**

**vmfcopy \* \* e = = f (prodid 5684100E%PVM replace olddate**

*addr2* is any free disk address on the MAINT user ID

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

**b** If servicing using SFS

**access VMSYS:P684100E.PVM.HELPAME e**

**access 19d f**

**vmfcopy \* \* e = = f (prodid 5684100E%PVM replace olddate**

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

- c** Re-build the CMS HELP logical saved segment, to include PVM's help files from the AMENG Help (MAINT's 19D) disk. See the 'Placing (Serviced) Components into Production' section of the *VM/ESA Service Guide* for detailed information about how these segments should be saved on your system. (Note that you will need to use **(all** instead of **(serviced** on the VMSES/E VMFBLD command when re-building any segments.)

## 6.5.3 Define and Build Saved Segments (optional)

### Notes:

1. User errors can occur after building the MPVM segment prior to placing the SYSTEM SEGID on the CMS 190/490 disk and resaving the CMS Named Saved System.
2. The way in which the MPVM saved segment is defined and built depends on your operating system.

If you are running a VM/ESA 1.1.x system you will use the the EFGDCSS EXEC to build the MPVM shared segment. Proceed with 6.5.3.1, "Define and Build the MPVM Saved Segment Using EFGDCSS" to define and build the MPVM shared segment.

Otherwise, go to 6.5.3.2, "Define and Build the MPVM Saved Segment Using VMSES/E" on page 55 to define and build the the MPVM shared segment using VMSES/E.

### 6.5.3.1 Define and Build the MPVM Saved Segment Using EFGDCSS

The MPVM shared segment is built on VM/ESA 1.1.x systems using the EFGDCSS EXEC. This EXEC uses the SEGGEN command to build the MPVM shared segment which is the only supported method. For more information on the EFGDCSS EXEC refer to the "Installing MPVM in a Shared Segment" section in the "Tuning PVM Performance" chapter of the *VM/Pass-Through Facility Administration and Operation* manual.

### Notes:

1. VM/ESA 1.1.0 370 Feature and VM/ESA 1.1.5 users will have to first define the MPVM shared segment. See *VM/ESA CP Planning and Administration* manual for instruction on defining this segment.
2. VM/ESA 1.1.1 users will not have to define the segment as it is done via the EFGDCSS EXEC.

**1** Log on to the installation user ID P684100E.

**2** Establish the appropriate minidisk access order.

**vmfsetup 5684100E {PVMIPVMSFS}**

**3** Erase the existing SYSTEM SEGID from the A-disk.

#### Very Important

This will ensure that you are using the latest level of the SYSTEM SEGID file from the 190 System Disk. If you do not erase this file from any disk other than the 190-disk you may overlay other users logical segments that have been placed into production since the last time that the MPVM segments were built.

**erase system segid a**

If you get a rc=28 then the SYSTEM SEGID either was already erased or it has not ever been created.

**4** Execute the EFGDCSS EXEC to save the MPVM saved segment.

**efgdcss**

**Note:** You will be prompted for information from the EFGDCSS EXEC.

**What's next?**

The updated SYSTEM SEGID must be copied to the MAINT 190 minidisks so that users can use the MPVM saved segment. Go to 6.5.4.1, "Place the Updated SYSTEM SEGID Into Production for VM/ESA 1.1.x" on page 63 for details on how to place the SYSTEM SEGID into production.

### 6.5.3.2 Define and Build the MPVM Saved Segment Using VMSES/E

You will first have to define the segments to the system using the segment mapping tool VMFSGMAP. Once the segment is defined you will have to build it using the VMFBLD command.

For more information on using VMSES/E for saved segments, review Chapter 26, 'Using VMSES/E to Define, Build, and Manage Saved Segments' in the *VM/ESA CP Planning and Administration* manual.

**Note:** The defining and building of the MPVM saved segment should be performed from the installation user ID. If you move any segments that are currently defined on your system you must ensure that they are rebuilt from the user ID that maintains them.

**1** Log on to the installation user ID **P684100E**

**2** Establish write access to the Software Inventory Disk if it is not already linked R/W.

**Note:** If the MAINT 51D (SESELPS 51D for VM/ESA 1.1.0) 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**

**Note:** If you are installing on the VM/ESA 1.1.0 370 feature, change MAINT to **SESELPS**.

The MAINT 51D (SESELPS 51D for VM/ESA 1.1.0 370) disk is where the VMSES/E system level software inventory files reside.



4 Go to Add Segment Definition panel by pressing PF10.

**F10**

**F10** will take you from the Segment Map panel to the Add Segment Definition panel. See Figure 14 to see the Add Segment Definition panel that will be displayed.

```

                                Add Segment Definition
                                Lines 1 to nn of nn

OBJNAME....: {mpvmph|mpvmp}
DEFPARMS...:
SPACE.....:
TYPE.....: SEG
OBJDESC....:
OBJINFO....:
GT_16MB....: NO
DISKS.....:
SEGREQ....:
PROPID....: 5684100E pvm
BLDPARMS...: UNKNOWN

F1=Help    F2=Get Obj  F3=Exit    F4=Add Line  F5=Map      F6=Chk MEM
F7=Bkwd    F8=Fwd      F9=Retrieve F10=Seginfo  F11=Adj MEM F12=Cancel
====>
```

Figure 14. Add Segment Definition panel.

**5** Obtain the MPVM segment definitions from the prodpart file.

OBJNAME.....: {mpvmphlmpvm}  
PRODID.....: 5684100E pvm

Enter **mpvmph** in the OBJNAME field if you want to run the saved segment above the 16 Meg line. Otherwise, enter **mpvmp** to run the saved segment below the 16 Meg line.

Enter **5684100E pvm** in the PRODID field to select the MPVM segment information.

**F10**

**F10** will obtain the MPVM segment information from the 5684100E PRODPART file. See Figure 15 for the refreshed Add Segment definition panel that will be displayed if you selected the MPVMPH segment. Otherwise, see Figure 16 on page 59.

```
                                Add Segment Definition                                Lines 1 to nn of nn
OBJNAME.....: MPVMPH
DEFPARMS....: 1200-12FF SR
SPACE.....:
TYPE.....: PSEG
OBJDESC....: FOR BUILDING THE MPVM SHARED SEGMENT ABOVE THE 16M LINE
OBJINFO....:
GT_16MB....: YES
DISKS.....: 400
SEGREQ.....:
PRODID.....: 5684100E PVM
BLDPARMS...: PROD(LSEG MPVMHIGH)

VMFSMD2760I SEGINFO processing completed SUCCESSFULLY
F1=Help    F2=Get Obj  F3=Exit    F4=Add Line  F5=Map      F6=Chk MEM
F7=Bkwd    F8=Fwd      F9=Retrieve F10=Seginfo F11=Adj MEM F12=Cancel
====>
```

Figure 15. Add Segment Definition panel showing the MPVMPH saved segment

```

                                Add Segment Definition
                                Lines 1 to nn of nn

OBJNAME....: MPVMP
DEFPARMS...: 500-5FF SR
SPACE.....:
TYPE.....: PSEG
OBJDESC....: FOR BUILDING THE MPVM SHARED SEGMENT BELOW THE 16M LINE
OBJINFO....:
GT_16MB....: NO
DISKS.....: 400
SEGREQ....:
PRODID.....: 5684100E PVM
BLDPARMS...: PROD(LSEG MPVM)

VMFSMD2760I SEGINFO processing completed SUCCESSFULLY
F1=Help    F2=Get Obj  F3=Exit    F4=Add Line  F5=Map      F6=Chk MEM
F7=Bkwd    F8=Fwd      F9=Retrieve F10=Seginfo F11=Adj MEM F12=Cancel
====>
```

Figure 16. Add Segment Definition panel showing the MPVMP saved segment

**6** Make any desired changes to the segment information displayed in either Figure 15 on page 58 or Figure 16 on page 59.

**7** Go back to the Segment Map panel.

**F5**

**F5** will return you to the Segment Map panel. See Figure 17 for the refreshed Segment Map panel that will be displayed if you selected the MPVMPH segment. Otherwise, see Figure 18 on page 61.

```
VMFSGMAP - Segment Map                                     More: -
Lines xx to yy of zz
P MPVMPH DCS 0.....1.....RRRRRRRRRRRRRRR3.....
Name      Typ 014-MB      015-MB      016-MB      017-MB
0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
CMSFILES DCS -----RRRRRRRRRRRRRRRRRRRRRR6.....7.....
===== End Segment Map =====

F1=Help      F2=Chk Obj   F3=Exit      F4=Chg Obj   F5=File      F6=Save
F7=Bkwd      F8=Fwd       F9=Retrieve   F10=Add Obj  F11=Del Obj  F12=Cancel
====>
```

Figure 17. Segment Map panel with MPVMPH saved segment

```

VMFSGMAP - Segment Map
More: + -
Lines xx to yy of zz
P MPVMP DCS 4.....RRRRRRRRRRRRRRR6.....7.....

Name      Typ 008-MB      009-MB      00A-MB      00B-MB
DOSBAM    SPA 8.....9.....A.....=====
CMSBAM    MEM 8.....9.....A.....BRRR.....
CMSDOS    MEM 8.....9.....A.....R.....
CMSVLIB   DCS RRRRRRRRRRRRRR9.....A.....B.....
DOSINST   DCS 8.....R-----A.....B.....
NLSUCENG  DCS 8.....9.....A.....RRRRRRRRRRRRRRR
NLSKANJI  DCS 8.....9.....A.....RRRRRRRRRRRRRRR
NLSFRANC  DCS 8.....9.....A.....RRRRRRRRRRRRRRR
NLSESPAN  DCS 8.....9.....A.....RRRRRRRRRRRRRRR
NLSHANZI  DCS 8.....9.....A.....RRRRRRRRRRRRRRR
NLSCANFR  DCS 8.....9.....A.....RRRRRRRRRRRRRRR

Name      Typ 00C-MB      00D-MB      00E-MB      00F-MB
F1=Help   F2=Chk Obj  F3=Exit    F4=Chg Obj  F5=File    F6=Save
F7=Bkwd   F8=Fwd     F9=Retrieve F10=Add Obj F11=Del Obj F12=Cancel
====>

```

Figure 18. Segment Map panel with MPVMP saved segment

**8** Save the new information and exit from the Segment Map panel.

**F5**

Ready;

**F5** saves all changed information and exits the map panel.

**9** Prepare to build the MPVM segment.

**a** IPL CMS to clear the virtual storage

**\*\* DO NOT PRESS ENTER AT THE VM READ! \*\***

**ipl cms parm clear nosprof instseg no**

**access (noprof**

IPL CMS to clear your virtual machine. This command bypasses the execution of the system profile (SYSPROF EXEC) and without loading the installation saved segment (CMSINST).

Bypass the execution of the PROFILE EXEC.

**b** Access the VMSES/E code

**access 5e5 b**

**C** Establish write access the Software Inventory Disk

**link maint 51d 51d mr  
access 51d d**

**10** Run VMFBLD to build the MPVMPH or the MPVMP saved segment.

**Note:** There may be additional build requirements remaining after building the saved segment. You should only build the MPVMPH or the MPVMP saved segment from this user ID. Any other segments that need to be built should be done from the user ID that is used to maintain them.

**vmfbld ppf segbld {esa20lesasegs} segblist {mpvmph|mpvmp} (serviced**

Use **esa20** if on VM/ESA 1.2.0. Otherwise, use **esasegs**.

Use **mpvmph** if you are building the MPVM segment above the 16 Meg line. Otherwise, use **mpvmp**.

```
VMFBLD2760I VMFBLD processing started
VMFBLD1851I Reading build lists
VMFBLD2182I Identifying new build requirements
VMFBLD2182I No new build requirements identified
VMFBLD1851I (1 of 1) VMFBDS processing SEGBLIST EXC00000
VMFBDS2115I Validating segment MPVMP|MPVMPH
VMFBDS2002I A DEFSEG command will be issued for 1 segment(s).
VMFBDS2219I Processing object MPVMP|MPVMPH.SEGMENT
HCPNSS440I Saved segment MPVMP|MPVMPH was successfully saved in fileid 0441.
VMFBDS2003W The SYSTEM SEGID D(51D) file has been changed and must be moved to
the S disk.
VMFBLD1851I (1 of 1) VMFBDS completed with return code 4
VMFBLD2180I There are n build requirements remaining
VMFBLD2760I VMFBLD processing completed with warnings
Ready(00004); T=s.ss/s.ss hh:mm:ss
```

**What's next?**

The updated SYSTEM SEGID must be copied to the MAINT 190 minidisks so that users can use the MPVM saved segment. Go to 6.5.4.2, "Place the Updated SYSTEM SEGID Into Production for VM/ESA 1.2.x and later" on page 64 for details on how to place the SYSTEM SEGID into production.

## 6.5.4 Place the Updated SYSTEM SEGID Into Production

Since the MPVM saved segment is a logical segment the SYSTEM SEGID must be moved to the MAINT 190 disk in order for users to be able to use it. Since this file is being copied to the MAINT 190 disk the CMS NSS must also be resaved. This procedure should be done from the MAINT user ID.

You should proceed with this section only if you have built the MPVM saved segment. Continue with one of the following:

6.5.4.1, "Place the Updated SYSTEM SEGID Into Production for VM/ESA 1.1.x"

6.5.4.2, "Place the Updated SYSTEM SEGID Into Production for VM/ESA 1.2.x and later" on page 64

### 6.5.4.1 Place the Updated SYSTEM SEGID Into Production for VM/ESA 1.1.x

This section is only to be used to place the SYSTEM SEGID into production for VM/ESA 1.1.x systems.

- 1** Log on to the MAINT user ID.
- 2** Access the minidisk containing the updated SYSTEM SEGID file for the MPVM saved segment.

**link P684100E 191** *vaddr rr*  
**access** *vaddr r*

*vaddr* is any free virtual address.

- 3** Access the test system disk, the MAINT 490 disk and the system disk the MAINT 190 disk. VM copies the 490 disk to the 190 disk to place its service into production. Therefore, you must also copy the updated SYSTEM SEGID to the 490 disk so that the MPVM segment data will not be lost when the VM code is placed into production.

**access 490 t**  
**access 190 u**

- 4** Copy the updated SYSTEM SEGID to the MAINT 490 and 190 disk.

**vmfcopy system segid r = = t2 (prodid 5684100E%PVM olddate replace**  
**vmfcopy system segid r = = u2 (prodid 5684100E%PVM olddate replace**

The SYSTEM SEGID must have a filemode of **2**.

- 5** Resave the CMS Named Saved System. Since the SYSTEM SEGID was copied to the 190 disk you must resave the CMS NSS.

VM/ESA 1.1.1 users only!

**sampnss cms**

The SAMPNSS EXEC creates a skeleton CMS NSS which is required to save the CMS NSS.

End of VM/ESA 1.1.1 users only!

**ipl 190 clear parm savesys cms**

#### What's next?

Proceed with 6.5.5, "Log On to the Server Machines." on page 65 to bring up the new PVM code on your server machines.

### **6.5.4.2 Place the Updated SYSTEM SEGID Into Production for VM/ESA 1.2.x and later**

This section is only to be used to place the SYSTEM SEGID into production for VM/ESA 1.2.0 and later systems.

- 1** Log on to the **MAINT** user ID.
- 2** Access the minidisk containing the updated SYSTEM SEGID file for the MPVM saved segment.

**access 51d r**

- 3** Access the test system disk, the MAINT 490 disk and the system disk the MAINT 190 disk. VM copies the 490 disk to the 190 disk to place its service into production. Therefore, you must also copy the updated SYSTEM SEGID to the 490 disk so that the MPVM segment data will not be lost when the VM code is placed into production.

**access 490 t**  
**access 190 u**

**4** Copy the updated SYSTEM SEGID to the MAINT 490 and 190 disk.

**vmfcopy system segid r = = t2 (prodid 5684100E%PVM olddate replace**  
**vmfcopy system segid r = = u2 (prodid 5684100E%PVM olddate replace**

The SYSTEM SEGID must have a filemode of **2**.

**5** Resave the CMS Named Saved System. Since the SYSTEM SEGID was copied to the 190 disk you must resave the CMS NSS.

VM/ESA 1.2.1 users only

**access 193 z**

The SAMPNSS EXEC exists on the MAINT 193 minidisk.

End of VM/ESA 1.2.1 users only

**sampnss cms**  
**ipl 190 clear parm savesys cms**

The SAMPNSS EXEC creates a skeleton CMS NSS which is required to save the CMS NSS.

### **6.5.5 Log On to the Server Machines.**

Bring up your server machines by logging on to them. Logging on to them will restart them with the production code. First ensure that the installation user ID is not logged on. This will ensure that the server machines will be able to get their 191 minidisks in R/W mode.

**Note:** If you are migrating from a previous level of PVM you will first need to log the server machines off and then back on as they are currently running the old level of PVM.

**The VM/Pass-Through Facility product is now installed and built on your system.**

---

## 7.0 Service Instructions

**Note!**

If applying a PVM RSU, read through the latest RSU information hard copy memo before continuing with this section. You will return to a step in this chapter specified in that memo.

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

To become more familiar with service using VMSES/E, you should read the introductory chapters in:

- *VMSES/E Introduction and Reference* manual

**OR**

- *VMSES/E 370 Feature Introduction and Reference for Licensed Products* manual, SC24-5659

These manuals also contain the command syntax for the VMSES/E commands listed in the procedure.

**Notes:**

1. Each step of the servicing instructions must be followed. Do not skip any step unless otherwise directed to. All instructions showing accessing of disks assume the use of default minidisk addresses or SFS directories. If different minidisk addresses or SFS directory names are used, change the instructions appropriately.
2. If the service instructions are not completed at one time, you can issue VMFSETUP and continue with the step you left off at.

---

### 7.1 VMSES/E Service Process Overview

The overview will give a brief description of the main steps in servicing VM/Pass-Through Facility using VMSES/E.

- Merge Service

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

- Receive Service

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

- Apply Service

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

- Reapply Local Service (if applicable)

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

- Build New Levels

The build tasks generates the serviced level of an object and places the new object on a BUILD disk or directory.

- Place the New Service into Production

Once the service is satisfactorily tested it should be put into production by copying the new service to the production disk, re-saving the NSS (Named Saved System) or DCSS (Discontiguous Saved Segments), etc.

---

## 7.2 Servicing PVM

### 7.2.1 Prepare to Receive Service

The *ppfname* used throughout these instructions is **5684100E**, which assumes you are using the override PPF supplied by IBM for PVM. If you have your own PPF override file for PVM, you should use your file's *ppfname* instead of **5684100E**. The *ppfname* you use should be used **throughout** the rest of this procedure.

**1** Log onto the PVM service user ID **P684100E**

**2** Establish write access to the Software Inventory Disk if it is not already linked R/W.

**Note:** If the MAINT 51D (SESELPS 51D for VM/ESA 1.1.0 370 feature) 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**

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

**3** Have the PVM CORrective tape mounted and attached to **P684100E** as 181.

**4** Receive the documentation.

**Electronic Service**

If you are receiving service from ServiceLink (electronic service) see Appendix A, 'Receiving Service for VMSES Envelopes', section Receive Service Documentation, in the *VM/ESA Service Guide*. Remember to substitute the *ppfname* and *compname* used for servicing PVM in the instructions shown in that Appendix. Then return back to step 6.

**vmfrec info**

The INFO option loads the documentation and displays a list of all products on the tape.

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

**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 components on the tape.

**6** Read the product memo (5684100E MEMO) before going on. These memos are loaded to the A-disk.

**7** Setup the correct minidisk access order

**vmfsetup 5684100E {PVMIPVMSFS}**

Use component name **PVM** if the product is installed on minidisks or **PVMSFS** if the product is installed in SFS.

```

VMFSET2760I VMFSETUP processing started
VMFUTL2205I Minidisk|Directory Assignments:
              String  Mode  Stat  Vdev  Label/Directory
VMFUTL2205I LOCALSAM  E    R/W  2C2  P682C2
VMFUTL2205I APPLY     F    R/W  2A6  P682A6
VMFUTL2205I           G    R/W  2A2  P682A2
VMFUTL2205I DELTA    H    R/W  2D2  P682D2
VMFUTL2205I BUILD0    I    R/W  400  P68400
VMFUTL2205I BUILD4    J    R/W  404  P68404
VMFUTL2205I BUILD6    K    R/W  29D  P6829D
VMFUTL2205I BASE     L    R/W  2B2  P682B2
VMFUTL2205I -----  A    R/W  191  P68191
VMFUTL2205I -----  B    R/O  5E5  MNT5E5
VMFUTL2205I -----  D    R/W  51D  MNT51D
VMFUTL2205I -----  S    R/O  190  MNT190
VMFUTL2205I -----  Y/S  R/O  19E  MNT19E
VMFSET2760I VMFSETUP processing completed successfully
READY;

```

- 8 Clear the alternate APPLY disk for the new service. This command will copy the contents of the alternate apply disk to the production apply disk.

**vmfmrdsk 5684100E {PVMIPVMSFS} apply**

Use component name **PVM** if the product is installed on minidisks or **PVMSFS** if the product is installed in SFS.

This command clears the alternate APPLY disk.

```

VMFMRD2760I VMFMRDSK processing started
VMFMRD1937I Merge of APPLY started
VMFMRD1938I Merging APPLY 2A6 to 2A2
VMFMRD2065I APPLY 2A2 is now n percent full
VMFMRD1939I Merge of APPLY completed
VMFMRD2760I VMFMRDSK processing completed successfully
READY;

```

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

**vmfview mrd**

## 7.2.2 Receive the Service

### Note

If you are receiving service from ServiceLink (electronic service) see Appendix A, 'Receiving Service for VMSES Envelopes', in the *VM/ESA Service Guide*. Remember to substitute the *ppfname* and *compname* used for servicing PVM in the instructions shown in that Appendix. Then return back to step 7.2.3, "Apply the Service" on page 71.

### 1 Receive the Service

**vmfrec ppf 5684100E {PVMIPVMSFS}**

Use component name **PVM** if the product is installed on minidisks or **PVMSFS** if the product is installed in SFS.

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

```
VMFREC2760I VMFREC processing started
:
VMFREC1852I Volume 1 of 1 of COR nnnn created on 11 March 93
VMFREC1851I (1 of 3) VMFRCAXL processing AXLIST
VMFRCX2159I Loading 0 part(s) to DELTA 2D2 (H)
VMFREC1851I (2 of 3) VMFRCPTF processing PARTLST
VMFRC2159I Loading 1 part(s) to DELTA 2D2 (H)
VMFREC1851I (3 of 3) VMFRCCOM processing DELTA
VMFRCC2159I Loading 1 part(s) to DELTA 2D2 (H)
VMFREC2189I Updating Requisite table 5684100E SRVREQT, Description table
           5684100E SRVDESCT and Receive Status table 5684100E SRVRECS with 1
           new PTFs from COR nnnn
VMFREC2760I VMFREC processing completed successfully
READY;
```

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

**vmfview receive**

## 7.2.3 Apply the Service

### 1 Apply the new service

**vmfapply ppf 5684100E {PVMIPVMSFS}**

Use component name **PVM** if the product is installed on minidisks or **PVMSFS** if the product is installed in SFS.

This command applies the service that you just received. The version vector table (VVT) is updated with all serviced parts and all necessary AUX files are generated on the alternate apply disk.

```
VMFAPP2760I VMFAPPLY processing started
VMFAPP1851I Processing user exit BUILDDT to set up
VMFAPP2106I Apply list 5684100E contains 1 PTFs that need to be applied and 0
             PTFs that are already applied
VMFAPP2102I 1 of 1 PTFs processed
VMFAPP2105I VMFAPPLY processing completed successfully.
             The Apply list 5684100E contains 1 PTFs.
             0 PTFs were already applied.
             1 PTFs applied successfully.
             0 PTFs were included.
             0 PTFs were excluded or require excluded PTFs.
             0 PTFs failed
VMFAPP2103I The Software Inventory has been updated on the 2A6 (F) disk
VMFAPP1851I Processing user exit BUILDDT to clean up
READY;
```

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

**vmfview apply**

## Note

If you get the message VMFAPP2120W then re-apply any local modifications before building the new PVM. Refer to chapter 7 in the *VM/ESA Service Guide*. Follow the steps that are applicable to your local modification.

For further information on the local modification process, refer to the "Installing Local Service" chapter of the *VM/ESA 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 PVM:

- **esalcl** should be **5684100E**
- **esa** should be **5684100E**
- *compname* should be **PVMSRC** or **PVMSSFS** (minidisk or SFS) if modifying any part on the 2B3 minidisk or directory, otherwise use **PVM** or **PVMSFS** (minidisk or SFS) for modifying any part on the 2B2 minidisk or directory.
- *appid* should be **5684100E**
- *fm-local* should be the fm of 2C2
- *fm-applyalt* should be the fm of 2A6

A couple of things that you need to keep in mind are:

- The 'Compile National Language Files' section is not applicable to PVM. See the PVMCMP command in the "PVM Commands" appendix and review the "National Languages on Your PVM System" chapter in the *VM/Pass-Through Facility Administration and Operation* manual.
- When you get to the "Rebuilding Objects" step in the *Service Guide* you should return back to this program directory at 7.2.4, "Update the Build Status Table" on page 72.

## Notes:

1. There is a local modification assemble file example in Appendix B, "Local Modification Example: Assemble File" on page 100.
2. If you are running VM/ESA 1.1.0 370 feature you still need to refer to the *Service Guide* for VM/ESA 1.1.1 or higher.

## 7.2.4 Update the Build Status Table

### 1 Update the Build Status Table with serviced parts.

**vmfbld ppf 5684100E {PVM|PVMSFS} (status**

Use component name **PVM** if the product is installed on minidisks or **PVMSFS** if the product is installed in SFS.

This command updates the build status table.

## Note

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

```
VMFBLD2760I VMFBLD processing started
VMFBLD1851I Processing user exit BUILDDT to set up
VMFBLD1851I Reading build lists
VMFBLD2182I Identifying new build requirements
VMFBLD2185R The following source product parameter files have been
serviced:
VMFBLD2185R 5684100E $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 5684100E $PPF on 191 (A) from level $PFnnnnn
```

**vmfppf 5684100E {PVMIPVMSFS}**

Use component name **PVM** if the product is installed on minidisks or **PVMSFS** if the product is installed in SFS.

**Note:** If you've created your own PPF override then use your PPF name instead of 5684100E.

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

**copy 5684100E \$ppf a = d (olddate replace  
erase 5684100E \$ppf a**

**Note:** **Do not** use your own PPF name in place of 5684100E for the COPY and ERASE commands.

**vmfbld ppf 5684100E {PVMIPVMSFS} (status  
1**

This will complete updating the build status table. When you receive the prompt that was previously displayed, enter a 1 to continue.

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

**vmfview build**

## 7.2.5 Build Service Objects

**1** Rebuild PVM serviced parts.

**vmfbld ppf 5684100E {PVMIPVMSFS} (serviced** Use component name **PVM** if the product is installed on minidisks or **PVMSFS** if the product is installed in SFS.

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

### vmfview build

**3** Required step for CVIEW CONPANEL files

If any of the CVIEW CONPANEL files were serviced then new SAVEPAN files must be created before proceeding with testing of CVIEW. To do this issue:

VM/ESA 1.1.0 ESA feature, VM/ESA 1.1.1 and later systems only

The DXGINIT EXEC will only run in a 370 mode virtual machine. In order to process the CVIEW menu files on a system **other than** VM/ESA 1.1.0 370 feature or VM/ESA 1.1.5, you will either need to switch to a 370 mode virtual machine or turn on CP's 370 accomodation depending on the VM/ESA Version you are installing PVM on.

**a** If on VM/ESA Version 1

**set machine 370**

**ipl cms**

IPL CMS to reset your virtual machine.

**b** If on VM/ESA Version 2

**set 370accom on**

End of VM/ESA 1.1.0 ESA feature, VM/ESA 1.1.1 and later systems only

**access 404 a**  
**dxginit**

The 404 disk (test disk for CVIEW) must be accessed as the A-disk to issue this command.

The DXGINIT EXEC will prompt you for additional information to customize the CVIEW server machine. You should answer the prompts according to how you want to set up your CVIEW environment.

**Note:**

Do not run the DXGCVIEW EXEC at this time.

For further details about this command see the *VM/Pass-Through Facility Administration and Operation* manual.

---

VM/ESA 1.1.1 and later systems only

**a** If on VM/ESA Version 1

**set machine xa**

**ipl cms**

IPL CMS to restore the machine environment to XA.

**b** If on VM/ESA Version 2

**set 370accom off**

---

End of VM/ESA 1.1.1 and later systems only

---

## 7.3 Optional Service Steps (depending on what was installed)

### 7.3.1 Servicing the Uppercase English Files

- 1 Re-build Uppercase English serviced parts

**vmfbld ppf 5684100E {PVMUCENG|PVMUSFS} (serviced setup**

Use component name **PVMUCENG** if the product is installed on minidisks or **PVMUSFS** if the product is installed in SFS

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

- 2 Place Uppercase English help files into production from P684100E's 502 disk to Maint's 402 disk.

- a Log on to **MAINT**

This step has to be done from the MAINT user ID

- 1 If installing using minidisks

**link P684100E 502 addr rr** *addr* is any free disk address on the MAINT user ID  
**access addr e**  
**access 402 f**  
**vmfcopy \* \* e = = f (prodid 5684100E%PVM replace olddate**

- 2 If installing using SFS

**access VMSYS:P684100E.PVM.HELPUCE e**  
**access 402 f**  
**vmfcopy \* \* e = = f (prodid 5684100E%PVM replace olddate**

---

## 7.4 Test the new PVM Service

At this point you can test the service that was applied. Go to Appendix A, "Test the Installation/Service for PVM" on page 87 for the minimum steps necessary for ensuring that your new code is functional. When your testing is complete you will return to 7.5, "Place serviced PVM into Production" to place the service into production.

---

## 7.5 Place serviced PVM into Production

### Important note

This procedure should only be done when you have successfully tested the new service. Once you perform this step you can not back off to your previous production code. See the "Removing Service Levels" chapter in the *VM/ESA Service Guide* for further details regarding backing off service levels.

Placing the PVM 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 new PVM user code is made available for users by placing it on the MAINT 19E minidisk.

### 7.5.1 Copy the Server Code to the Production Minidisks

This step will be accomplished by using the IN2PROD EXEC. to find out more information on the IN2PROD EXEC issue **in2prod {?|help}** after accessing the 400 minidisk.

**1** Log on to P684100E, if you are not already logged on to it.

**2** Access the disk where the IN2PROD EXEC resides

**access 400 e**

If you are planning on using any combination of PVM, PVMG, MPVM or CVEIW, but not all, continue with step 3 and select the applicable steps. Otherwise, issue the following command:

**in2prod all**

**Note:** For processing the PVMG/VSE files, see Appendix C, "PVMG/VSE SPE Overview" on page 103.

If you are NOT running VM/ESA 1.1.0 370 feature or VM/ESA 1.1.1 then continue with 7.5.2, "Copy the PVM Production code to MAINT's Minidisks" on page 78. Otherwise the CVIEW file CONSULT IDNAME, serviced with filemode 1, must be renamed to filemode 0 on P684100E's 405 minidisk.

**access 405 f**

**rename consult idname f1 = = f0**

Continue with 7.5.2, "Copy the PVM Production code to MAINT's Minidisks" on page 78.

**3** If you are using PVM, copy server code to P684100E's 401 disk

**in2prod pvm**

**Note:** The PVM server machine links to the 401 disk as it's 191.

**4** If you are using PVMG, copy server code to P684100E's 402 disk

**in2prod pvmg**

**Note:** The PVMG server machine links to the 402 disk as it's 191.

**5** If you are using MPVM, copy code to P684100E's 403 disk

**in2prod mpvm**

**Note:** MPVM users link to the 403 disk as PVM's 199 disk.

**6** If you are using CVIEW, copy server code to P684100E's 405 disk

**in2prod cview**

**Note:** The CVIEW server machine links to the 405 disk as it's 191.

---

VM/ESA 1.1.0 370 feature and VM/ESA 1.1.1 Users Only

The CVIEW file CONSULT IDNAME is serviced with a filemode of 1. It must be renamed to filemode 0 on P684100E's 405 minidisk.

**access 405 f**  
**rename consult idname f1 = = f0**

---

End of VM/ESA 1.1.0 370 feature and VM/ESA 1.1.1 Users Only

**7** Log off of P684100E so that the server machines can gain R/W access to their 191 minidisks when re-establishing your production environment.

**logoff**

## 7.5.2 Copy the PVM Production code to MAINT's Minidisks

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

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

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

**2** Copy the system Y-disk code from P684100E's 400 disk to Maint's 19e disk

**link P684100E 400** *addr rr* *addr* is any free disk address on the MAINT user  
**access** *addr e* ID  
**access 19E f**  
**vmfcopy dvmusi \* e = = f (prodid 5684100E%PVM olddate replace**  
**vmfcopy mpvm exec e = = f (prodid 5684100E%PVM olddate replace**  
**vmfcopy passthru exec e = = f (prodid 5684100E%PVM olddate replace**

**Notes:**

1. MPVM and PASSTHRU users require files placed on the 19E disk.
2. Re-save the CMS saved system, to return the Y-disk (product code or MAINT's 19E disk) to 'shared' status. See the 'Placing (Serviced) Components into Production' section of the *VM/ESA Service Guide* for detailed information about how to save the CMS saved system.

**3** Copy IPCS/Dump Viewing Facility TEXT code from P684100E's 400 disk to Maint's 193 and 493 disk.

**access** *addr e* *addr* is the same free MAINT address used in step  
**access 193 f** 2 above  
**vmfcopy help pvm e = = f (prodid 5684100E%PVM olddate replace**  
**vmfcopy \* text e = = f (prodid 5684100E%PVM olddate replace**

**Notes:**

1. IPCS/Dump Viewing facilities for PVM require the 193 disk.
2. The HELP PVM file contains help information on IPCS/DVF subcommands provided by PVM which may be useful when examining system abend dumps produced by the PVM server.

**access 493 f**  
**vmfcopy help pvm e = = f (prodid 5684100E%PVM olddate replace**  
**vmfcopy \* text e = = f (prodid 5684100E%PVM olddate replace**

#### 4 Copy help files from P684100E's 29D disk to Maint's 19D disk

##### a If servicing using minidisks

```
link P684100E 29d addr2 rr
access addr2 e
access 19d f
vmfcopy * * e = = f (prodid 5684100E%PVM replace olddate
```

addr2 is another free MAINT user ID disk address

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

##### b If servicing using SFS

```
access VMSYS:P684100E.PVM.HELPA ME e
access 19d f
vmfcopy * * e = = f (prodid 5684100E%PVM replace olddate
```

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

##### c Re-build the CMS HELP logical saved segment, to include PVM's help files from the AMENG Help (MAINT's 19D) disk. See the 'Placing (Serviced) Components into Production' section of the *VM/ESA Service Guide* for detailed information about how these segments should be saved on your system. (Note that you will need to use **(all** instead of **(serviced** on the VMFBLD command when re-building any segments.)

### 7.5.3 Rebuild MPVM Shared Segment

#### Notes:

1. User errors can occur after building the MPVM segment prior to placing the SYSTEM SEGID on the CMS 190/490 disk and resaving the CMS Named Saved System.
2. If you are using a shared segment for the MPVM code then you will need to follow this section. Otherwise, go to 7.5.5, "Reinitialize the Server Machines." on page 85 to bring up the server machines with the new code.

If you are following this section and you are running a VM/ESA 1.1.x system then continue with 7.5.3.1, "Rebuild MPVM Shared Segment Using the EFGDCSS EXEC" on page 81.

If your operating system is VM/ESA 1.2.0 or higher then proceed with 7.5.3.2, "Rebuild MPVM Shared Segment Using VMSES/E" on page 82.

### 7.5.3.1 Rebuild MPVM Shared Segment Using the EFGDCSS EXEC

The MPVM shared segment is built on VM/ESA 1.1.x systems using the EFGDCSS EXEC. This EXEC uses the SEGGEN command to build the MPVM shared segment which is the only supported method.

For more information on the EFGDCSS EXEC refer to the "Installing MPVM in a Shared Segment" section in the "Tuning PVM Performance" chapter of the *VM/Pass-Through Facility Administration and Operation* manual.

#### Notes:

1. VM/ESA 1.1.0 370 Feature and VM/ESA 1.1.5 users will have to first define the MPVM shared segment. See *VM/ESA CP Planning and Administration* manual for information on defining this segment.
2. VM/ESA 1.1.1 users will not have to define the segment as it is done via the EFGDCSS EXEC.

**1** Log on to the installation user ID P684100E.

**2** Establish the appropriate minidisk access order.

**vmfsetup 5684100E {PVMIPVMSFS}**

**3** Erase the existing SYSTEM SEGID from the A-disk.

#### Very Important

This will ensure you are using the latest level of the SYSTEM SEGID file from the 190 System Disk. If you do not erase this file from any disk other than the 190-disk you may overlay other users logical segments that were placed into production since the last time the MPVM segment was built.

**erase system segid a**

An rc=28 indicates the SYSTEM SEGID either was already erased or has never been created.

**4** Execute the EFGDCSS EXEC to save the MPVM saved segment.

**efgdcss**

**Note:** You will be prompted for information from the EFGDCSS EXEC.

#### What's next?

The updated SYSTEM SEGID must be copied to the MAINT 190 minidisks so that users can use the MPVM saved segment. Go to 7.5.4, "Place the Updated SYSTEM SEGID Into Production" on page 82 for details on how to make this file available to MPVM users.

### 7.5.3.2 Rebuild MPVM Shared Segment Using VMSES/E

**1** Log on to service user ID **P684100E**.

**2** Re-build Segments

```
ipl 190 clear parm nosprof instseg no
access (nosprof
access 5e5 b
access 51d d
vmfbld ppf segbld {esa20lesasegs} segblist {mpvmpmpvmpmh} (all
```

Use **mpvmp** when building below the 16 Meg line, and **mpvmpmh** when building above the 16 Meg line.

Use **esa20** for VM/ESA 1.2.0, otherwise use **esasegs**.

A successful build will complete with a return code of 4 and a warning message is issued since the SYSTEM SEGID file must be moved. Continue on with 7.5.4, "Place the Updated SYSTEM SEGID Into Production."

### 7.5.4 Place the Updated SYSTEM SEGID Into Production

Since the MPVM saved segment is a logical segment the SYSTEM SEGID must be moved to the MAINT 190 disk in order for users to be able to use it. Since this file is being copied to the MAINT 190 disk the CMS NSS must also be resaved. This procedure should be done from the MAINT user ID.

If you are not using the MPVM shared segment or it was not rebuilt proceed with 7.5.5, "Reinitialize the Server Machines." on page 85 Otherwise continue with one of the following:

- 7.5.4.1, "Place the Updated SYSTEM SEGID Into Production for VM/ESA 1.1.x"
- 7.5.4.2, "Place the Updated SYSTEM SEGID Into Production for VM/ESA 1.2.x and later" on page 84

#### 7.5.4.1 Place the Updated SYSTEM SEGID Into Production for VM/ESA 1.1.x

This section is only to be used to place the SYSTEM SEGID into production for VM/ESA 1.1.x systems.

**1** Log on to the **MAINT** user ID.

- 2 Access the minidisk containing the updated SYSTEM SEGID file for the MPVM saved segment.

**link P684100E 191 vaddr rr**  
**access vaddr r**

vaddr is any free virtual address.

- 3 Access the test system disk, the MAINT 490 disk and the system disk the MAINT 190 disk. VM copies the 490 disk to the 190 disk to place its service into production. Therefore, you must also copy the updated SYSTEM SEGID to the 490 disk so that the MPVM segment data will not be lost when the VM code is placed into production.

**access 490 t**  
**access 190 u**

- 4 Copy the updated SYSTEM SEGID to the MAINT 490 and 190 disk.

**vmfcopy system segid r = = t2 (prodid 5684100E%PVM olddate replace**  
**vmfcopy system segid r = = u2 (prodid 5684100E%PVM olddate replace**

The SYSTEM SEGID must have a filemode of 2.

- 5 Resave the CMS Named Saved System. Since the SYSTEM SEGID was copied to the 190 disk you must resave the CMS NSS.

VM/ESA 1.1.1 users only!

**sampnss cms**

The SAMPNSS EXEC creates a skeleton CMS NSS which is required to save the CMS NSS.

End of VM/ESA 1.1.1 users only!

**ipl 190 clear parm savesys cms**

#### What's next?

Proceed with 7.5.5, "Reinitialize the Server Machines." on page 85 to bring up the new PVM code on your server machines.

### 7.5.4.2 Place the Updated SYSTEM SEGID Into Production for VM/ESA 1.2.x and later

This section is only to be used to place the SYSTEM SEGID into production for VM/ESA 1.2.0 and later systems.

- 1** Log on to the **MAINT** user ID.
- 2** Access the minidisk containing the updated SYSTEM SEGID file for the MPVM saved segment.

**access 51d r**

- 3** Access the test system disk, the MAINT 490 disk and the system disk the MAINT 190 disk. VM copies the 490 disk to the 190 disk to place its service into production. Therefore, you must also copy the updated SYSTEM SEGID to the 490 disk so that the MPVM segment data will not be lost when the VM code is placed into production.

**access 490 t**  
**access 190 u**

- 4** Copy the updated SYSTEM SEGID to the MAINT 490 and 190 disk.

**vmfcopy system segid r = = t2 (prodid 5684100E%PVM olddate replace**  
**vmfcopy system segid r = = u2 (prodid 5684100E%PVM olddate replace**

The SYSTEM SEGID must have a filemode of **2**.

- 5** Resave the CMS Named Saved System. Since the SYSTEM SEGID was copied to the 190 disk you must resave the CMS NSS.

VM/ESA 1.2.1 users only

**access 193 z**

The SAMPNSS EXEC exists on the MAINT 193 minidisk.

End of VM/ESA 1.2.1 users only

**sampnss cms**  
**ipl 190 clear parm savesys cms**

The SAMPNSS EXEC creates a skeleton CMS NSS which is required to save the CMS NSS.

### What's next?

Proceed with 7.5.5, "Reinitialize the Server Machines." on page 85 to bring up the new PVM code on your server machines.

## 7.5.5 Reinitialize the Server Machines.

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

**Note:** Ensure that the installation user ID P684100E is not logged on. If the installation user ID is logged on it will prevent the servers from getting their 191 minidisks accessed R/W.

### 7.5.5.1 Reinitialize the PVM Server Machine

- 1 Log on to PVM.
- 2 Shutdown the PVM server machine.

**shutdown**

- 3 IPL CMS to reset the server machine.

**ipl cms**

After the server initializes you can disconnect from it.

- 4 Disconnect from the server machine.

**disc**

The server is now ready for use.

### 7.5.5.2 Reinitialize the CVIEW Server Machine

- 1 Log on to CVIEW.
- 2 Shutdown the CVIEW server machine.

**shutdown**

- 3 IPL CMS to reset the server machine.

**ipl cms**

After the server initializes you can disconnect from it.

**4** Disconnect from the server machine.

**cp disc**

The server is now ready for use.

### **7.5.5.3 Reinitialize the PVMG Server Machine**

**1** Log on to PVMG.

**2** Shutdown the PVMG server machine.

**pvmg shutdown**

**3** IPL GCS to reset the server machine.

**ipl gcs**

After the server initializes you can disconnect from it.

**4** Disconnect from the server machine.

**pvmg disc**

The server is now ready for use.

**You have now finished servicing the VM/Pass-Through Facility product**

---

## Appendix A. Test the Installation/Service for PVM

This Appendix is used for testing the initial installation of PVM and its related server machines. It will also be used prior to placing new service into production. You should follow the steps to test each of the server machines that you are using.

### Notes

1. This procedure will require the PVM server machines to be shutdown, therefore, you should only test when it will least disrupt your production environment.
2. If the install ID is logged on you will get messages stating that the minidisks can not be accessed R/W. The install ID should be logged off during this procedure.
3. If you are migrating remote 3270 devices from CP owned in VM/SP, VM/SP HPO, or VM/ESA 370 (1.1.0 370 feature or 1.5.0) to PVM owned, please review the conversion information in Appendix F, "Defining Remote BSC Devices to PVM" on page 120 before continuing.
4. Once these instructions have been completed, logging the servers off and back on will cause them to be running the old level of PVM code.
5. A successful installation of PVM does not mean that your customization is correct. The installation complete messages only means that everything from the tape has been properly installed onto the disk (or disks).
6. Follow the instructions and enter the commands, as shown after each **Step**, substituting *variable* information where required.
7. If after entering a node from one of the PVM/MPVM selection screens you get either of the following error messages:  

```
SEC01: NOT ALLOWED TO DESTINATION  
SEC06: REMOTE AUTH TABLE NOT BUILT
```

Then you need to either create or modify the REMOTE AUTH file on PVM's 191 minidisk. See the Appendix "PVM Access Security Exits" in the *VM/Pass-Through Facility Administration and Operation* manual for details on this file.
8. If you get a VM Logo screen instead of the PVM selection screen when DIALing PVM or issuing the PASSTHRU command it is due to the LNODE \* AUTO option specified in the PVM CONFIG file. See the description of the PVM LNODE configuration file record in Appendix D of the *VM/Pass-Through Facility Administration and Operation* manual for more information.
9. The PVM and CVIEW servers **require** the use of CP's **370 accomodation** support on VM/ESA Version 2. To turn this on, add the following line in the PROFILE EXEC for each server:  

```
'CP SET 370ACCOM ON'
```

---

## A.1 Test the PVM Server Machine

This procedure will test the new PVM code to see that it functions properly. You will log the PVM server machine on and access the appropriate disks. A second user ID is required in order to verify the PVM function.

**1** Log on to PVM server user ID **PVM**.

**2** Shutdown the PVM server machine.

**Note:** If you are installing PVM the server machine will be just coming up. When it has initialized you then can issue the shutdown command.

**shutdown**

**3** Define a temporary minidisk that will be used as PVM's A-disk.

**query virtual 191**

Note the number of cylinders/blocks of the 191 disk as it will be used in the next command.

**define t*dasd* v*addr* n*nn***

*dasd* is the DASD type of the temporary disk that you are going to define.

*vaddr* is any free virtual address on this user ID.

*nnn* is size of the temporary disk in blocks or cylinders depending on the DASD type. This value was obtained from the QUERY VIRTUAL 191 command.

#### 4 Format the temporary minidisk.

**format** *vaddr* **a**

*vaddr* is the virtual address that you defined.

```
DMSFOR603R FORMAT will erase all files on disk A(vaddr). Do you wish to continue?  
Enter 1 (YES) or 0 (NO).
```

**1**

```
DMSFOR605R Enter disk label:
```

**temp**

```
DMSFOR733I Formatting disk A  
DMSFOR732I n {cylinders|blocks} formatted on A(vaddr)
```

#### 5 access the test build disk.

**link P684100E 400** *vaddr* **rr**  
**access** *vaddr* **b**

*vaddr* is any free virtual address. This disk contains the code to be tested. It needs to be accessed ahead of the PVM 191 minidisk which contains the production code.

#### 6 Access PVM's 191 minidisk.

**access 191 c**

The PVM 191 minidisk containing the production code and config files must be accessed after the test build disk. This is to allow the new PVM code to be executed for testing.

#### 7 Start the PVM server machine using the new code.

**runpvm**

RUNPVM will start the PVM virtual machine. See Figure 19 for an example of the console displayed when starting the PVM server.

```
Execution begins...  
VM Pass-Through Facility 2.1.1000, built MM/DD/YY HH:MM:SS, is ready  
:
```

Figure 19. Sample screen that is displayed after starting the PVM server.

**8** Disconnect the PVM user ID

**disc**

**9** Log on to any other valid CMS user ID. This needs to be done so that you can issue the PASSTHRU command.

- a** Link to the test build disk P684100E's 400 minidisk.

**link P684100E 400 vaddr rr**  
**access vaddr b**

*vaddr* is any free virtual address. This disk contains the PASSTHRU EXEC which we will use to verify that PVM code is satisfactory.

- b** Execute the PASSTHRU EXEC.

**passthru**

A PVM Selection Menu should be displayed containing node IDs that were defined in the PVM configuration file. See Figure 20 on page 91 for a sample screen that will be displayed.

**Note:** If you get a VM Logo screen instead of the PVM selection screen it is due to the LNODE \* AUTO option specified in the PVM CONFIG file.

```

VM/Pass-Through Facility

You can select a node with the cursor and press ENTER

L RMTpVM1   G RMTpVM2   G RMTpVM5   S VSEAPL   S MVSTSO   N PVMG1
N RMTpVM3   R RMTSYS2   RMTpVM3    RMTSYS6   VMCMS

Destination ----->          Port ----->
Route ----->                Language -----> AMENG
End Session -----> #####    Verify -----> OFF
Your Identification -----> USER1

PF8= Scroll          CLEAR key = Top Screen          PA1= Exit
PF1=RMTpVM1  PF2=VSEAPL  PF3=MVSTSO  PF4=RMTpVM3  PF6=RMTpVM5

```

Figure 20. Sample screen that should be displayed after issuing PASSTHRU

**C** Leave the PVM selection screen.

**pa1**

**PA1** will exit the PVM selection screen.

**d** Do not disconnect from this user ID as it will be used to test the other PVM functions. Continue with A.2, "Verify the new MPVM code." to test the service for the MPVM server machine.

## A.2 Verify the new MPVM code.

This section will ensure that the new MPVM code is functional. A selection Menu will be displayed containing node IDs that were defined in the MPVMSYS and MPVM NAMES files. This ensures that the MPVM code is satisfactory.

**1** Establish access to the test MPVM code.

**link P684100E 400 vaddr rr**  
**access vaddr b**

*vaddr* is any free virtual address. This disk contains the test MPVM code which will be used to verify the new MPVM code.

**2** Establish access to the MPVMSYS NAMES file.

**link P684100E 403 vaddr2 rr**  
**access vaddr2 d**

*vaddr2* is any free virtual address. This disk contains the MPVMSYS NAMES file which is required to verify the new MPVM code.

**3** Execute MPVM to bring up the MPVM selection panel.

If you are running MPVM in a shared segment then you will need to zap the EFGVSTUB MODULE with a dummy segment name so that you can test the new MPVM code. You will need to issue:

**copyfile efgvstub module b = = a**  
**efgzap**

**Note:** Refer to the "Installing MPVM in a Shared Segment" section of the "Tuning PVM Performance" chapter in the *VM/Pass-Through Facility Administration and Operation* manual for creating test segments.

when prompted for segment names enter any name that is not a current saved segment on your system.

**mpvm**

See Figure 21 on page 93 for a sample of the panel that will be displayed.

```

VM/Pass-Through Facility

You can select a session with the cursor and press ENTER
-----
*ALL      session1  session2

-----
PF3=Return      PF8=Forward      PF6=Disconnect
PF7=Backward    PF11=Bottom     PF9=Retrieve
PF10=Top        PF12=EXIT
====>

```

Figure 21. Sample screen that should be displayed after issuing MPVM

- 4 You should run any MPVM MACROs that you have created to ensure that they are functional. Once you are happy with the MPVM function continue with the following step.
- 5 Verification of MPVM is now complete. Exit the MPVM selection panel.

**PF3** or **PF12**

- 6 If you zapped the EFGVSTUB MODULE with dummy segment names you need to erase it.

**erase efgvstub module a**

---

### A.3 Verify the new CVIEW code.

- 1 Log on to user ID **CVIEW**

**2** Shutdown the CVIEW server machine.

**Note:** If you are installing PVM the server machine will be just coming up. When it has initialized you then can issue the shutdown command.

**shutdown**

**3** Re-define the CVIEW 191 minidisk.

**def 191 405**

The CVIEW 191 minidisk is P684100E's 405 minidisk.

**4** Link the CVIEW test build disk as 191 and access it at filemode a.

**link p684100e 404 191 mr  
access 191 a**

The CVIEW test build disk will be used to test the new CVIEW code. The test disk must be R/W.

**5** Start the CVIEW server machine.

**profile**

The execution of the CVIEW PROFILE EXEC will start the CVIEW server machine. See Figure 22 for an example of the console displayed when starting the CVIEW server machine.

```
DXGCVI110I      Cooperative Viewing Facility (CVIEW)

DXGMAI250I CVIEW is operational.

DXGMAI250I You may now enter commands at the console.
DXGMAI250I For help on available commands type HELP and press ENTER.
DXGMAI250I To disconnect the console, type CP DISCONNECT and press ENTER.
```

Figure 22. Sample screen that is displayed after starting the CVIEW server.

**6** Disconnect from the CVIEW user ID.

**cp disc**

**7** Dial the CVIEW server from the VM logo screen to start a CVIEW session.

**dial cview**

This command will display a CVIEW session HOME panel. See Figure 23 for the panel that will be displayed.

```
HOME                COOPERATIVE VIEWING FACILITY (CVIEW)
-----
Enter an item number.

    Consultant session

        1 Receive assistance
        2 Give assistance

    Conference session

        3 Attend a conference
        4 Moderate a conference

Press ENTER after you enter an item number.
-----
PF: 1=Help    2=          3=Quit    4=          5=          6=
PF: 7=          8=          9=          10=         11=         12=

===>
```

Figure 23. CVIEW HOME panel that is displayed after dialing CVIEW.

**8** You can now start a CVIEW session to perform additional testing if you like. See Chapter 10. Using CVIEW, "Establishing a Session" of the *VM/Pass-Through Facility Administration and Operation* manual for details on how to establish a CVIEW session.

### What's Next?

Verification of CVIEW is now complete. Proceed with A.4, "Verify installation of PVMG" on page 96 to verify the new PVMG code if you are using the PVMG server machine. Otherwise continue with:

7.5, "Place serviced PVM into Production" on page 77 to place the new PVM code into production when servicing your system.

**OR**

6.5, "Place PVM Into Production" on page 50 to place the new PVM code into production for initial installations.

---

## A.4 Verify installation of PVMG

### Notes:

1. The prefix PVMG is used in the the command examples shown in this section. The command prefix is determined by the name you specified for PVMG when you loaded it using the LOADCMD command. See the "Defining Your PVMG Configuration" chapter of the *VM/Pass-Through Facility Administration and Operation* manual for more information.

**1** Log on to user ID **PVMG**

**2** Shutdown the PVMG server machine.

**Note:** If you are installing PVM the server machine will be just coming up. When it has initialized you then can issue the shutdown command.

### pvmg shutdown

**3** IPL CMS

### ipl cms

**4** Define the PVMG 191 minidisk to a temporary address.

### define 191 402

The PVMG 191 minidisk is P684100E's 402 minidisk.

**5** Define a temporary 191 minidisk.

**Note:** The minidisk address must be 191 as it is required when you IPL GCS to start the PVMG server machine.

**query virtual 402**

Note the number of cylinders/blocks of the 191 disk as it will be used in the next command.

**define t*dasd* 191 *nnn***

*dasd* is the DASD type of the temporary disk that you are going to define.

*nnn* is size of the temporary disk in blocks or cylinders depending on the DASD type. This value was obtained from the QUERY VIRTUAL 191 command.

## 6 Format the temporary 191 minidisk.

**format *vaddr* a**

*vaddr* is the virtual address that you defined.

DMSFOR603R FORMAT will erase all files on disk A(*vaddr*). Do you wish to continue?  
Enter 1 (YES) or 0 (NO).

**1**

DMSFOR605R Enter disk label:

**temp**

DMSFOR733I Formatting disk A  
DMSFOR732I *n* {cylinders|blocks} formatted on A(*vaddr*)

## 7 Access the test build disk.

**link P684100E 400 *vaddr* rr**

*vaddr* is any free virtual address. This disk contains the test PVMG LKEDIT and PVMG LOADLIB.

**access *vaddr* b**

## 8 Copy the test PVMG LKEDIT and PVMG LOADLIB to the test 191 minidisk.

**copyfile pvmg lkedit b = = a (olddate**  
**copyfile pvmg loadlib b = = a (olddate**

## 9 Access the 402 disk.

**access 402 b**

**10** Copy the PROFILE GCS and PVMG CONFIG to the test 191 minidisk.

**copyfile profile gcs b = = a (olddate)**  
**copyfile pvmg config b = = a (olddate)**

**11** Start the PVMG server machine.

**ipl gcs**

This command will invoke the PROFILE GCS which starts the PVMG server machine. See Figure 24 for an example of the console displayed when starting the PVMG server.

```
GCS
Generated at mm/dd/yy hh:mm:ss
GCTACC423I A (0191) R/W
Ready;
VM Pass-Through Gateway Services 2.1.1000, built mm/dd/yy hh:mm:ss, is ready
The PVMG command processor is ready
:
Ready;
```

Figure 24. Sample screen that is displayed after starting the PVMG server.

**12** Disconnect the PVMG user ID.

**pvmg disc**

**13** Dial the VTAM virtual machine to obtain the PVMG selection menu.

**dial VTAM**  
**logon applid(pvmgapplid)**

VTAM is the virtual machine identifier.  
*pvmgapplid* is the VTAM applid of PVMG.  
A PVMG Selection Menu should be displayed. See Figure 20 on page 91 for an example of this panel. Note that this panel is very similar to that of the PASSTHRU panel.

**14** Leave the PVMG Selection Menu

**pa1**

**PA1** will exit the PVMG selection screen.

### **What's Next?**

Verification of PVMG is now complete.

Proceed with:

7.5, "Place serviced PVM into Production" on page 77 to place the new PVM code into production when servicing your system.

**OR**

6.5, "Place PVM Into Production" on page 50 to place the new PVM code into production for initial installations.

---

## Appendix B. Local Modification Example: Assemble File

The following local mod example is for a VM/ESA 1.2.0 system.

If you are running a lower or higher level VM/ESA system you can still use this example. Some of the steps may be in a different order so you can cross reference the example against the *VM/ESA Service Guide*, Chapter 7, to help with the correct order.

### Note!

This appendix provides an example for updating the DVMAIN ASSEMBLE part. You should substitute the file name of the part you are modifying for DVMAIN in the instructions. Since the output of the instructions is to create a TEXT file type with an abbreviation of TXT, you should substitute the abbreviation of the file type you are modifying for TXT. You can use these instructions to create local modifications to a PVM message repository, exec, or any other PVM part.

### 1 Set up the required access order

**vmfsetup 5684100E {PVMSRCIPVMSSFS}**

*compname* is **PVMSRC** if servicing using minidisks or **PVMSSFS** if servicing using SFS

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

**vmfsim logmod 5684100E vvtlcl *fmlocal* tdata :part dvmain txt :mod lcl0001.update1**

*fmlocal* is the fm of the local modification and sample minidisk or directory

### 3 Create or update and edit the 5684100E \$SELECT file on the alternate apply disk.

**xedit 5684100E \$select *fmapply***

====> top

====> input :APPLYID.*mm/dd/yy hh:mm:ss*

====> input DVMAIN TXT

====> file

*fmapply* is the fm of the alternate apply minidisk or directory. *mm/dd/yy hh:mm:ss* is the current date and time and must be unique.

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

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

```
xedit dvmain auxlcl fmlocal (noprof
====> input UPDATE1 LCL LCL0001 * comment
====> file
```

*fmlocal* is the fm of the local modification and sample minidisk or directory

#### 5 XEDIT Source file to create the update file

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

```
xedit dvmain assemble (ctl pvm
====> fm fmlocal
```

*fmlocal* is the fm of the local modification and sample minidisk or directory

#### 6 Make your desired changes

#### 7 Issue the XEDIT file command when changes are completed

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

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

- PVMCMP to compile a message repository. See the PVMCMP command in the "PVM Commands" appendix and review the "National Languages on Your PVM System" chapter in the *VM/Pass-Through Facility Administration and Operation* manual.
- EXECUPTD to update a \$EXEC part
- This step may be skipped for other PVM parts such as full part replacement parts or build lists.

```
vmfhasm dvmain 5684100E
{PVMSRC|PVMSSFS}
```

Use component name **PVMSRC** if using minidisks or **PVMSSFS** if using SFS.

**9** Copy the updated text deck to the local modification and sample disk or directory

```
copyfile dvmain txtl0001 a = = fmlocal (olddate replace  
erase dvmain txtl0001 a
```

*fmlocal* is the fm of the local modification and sample minidisk or directory

**10** Build the PVM product by issuing VMFBLD

```
vmfbld ppf 5684100E {PVMIPVMSFS} (serviced
```

Use component name **pvm** if using minidisks or **pvmsfs** if using SFS.

---

## Appendix C. PVMG/VSE SPE Overview

PVMG/VSE will run on a VSE/ESA 1.3.x or VSE/ESA 2.1.0 guest machine of VM/ESA 1.1.0 and above as follows:

- For VSE/ESA 1.3.x, the VSE supervisor mode PVMG/VSE will run in is mode=vm or mode=vmesa. To utilize PVMG/VSE in an ESA supervisor mode, install PVMG/VSE in a mode=vmesa or mode=vm test VSE guest and couple that test VSE/VTAM to your production mode=esa VSE/VTAM using a virtual channel to channel connection between the two VTAMs via a VTAM CDRM definition.
- VSE/ESA 2.1 support in PVMG/VSE is provided by APAR VM59436. PVMG/VSE **will run** in ESA supervisor mode on VSE/ESA 2.1 with this APAR applied.

The PVMG/VSE SPE function is identical to the PVMG component of PVM for VM as described in the *VM/Pass-Through Facility Administration and Operation*, and *VM/Pass-Through Facility Messages* manuals except for the following:

- Disabling VM specific commands
- Disabling VM specific configuration file records,
- Specific VSE messages,
- Installing the PVMGVSE JCL and PVMGVSE JOB files onto the VSE guest machine.

These differences will be described in this appendix. See the listed manuals for any other specific PVMG descriptions not included here.

---

### C.1 Configuration File Record Changes

This section will detail the changes to the PVMG configuration file records from the VM environment to the VSE environment.

#### C.1.1 Disabled Records

The following configuration file records will be disabled in PVMG/VSE since they are VM dependant only and there is not a corresponding VSE function. If any of these records are encountered, the standard EFG011E message (Invalid configuration type record) will be issued to the console.

- DUMP  
A region can be taken in VSE to dump PVMG/VSE.
- MSGNOH  
This record tells PVMG to issues messages using the CP MSGNOH command rather than the CP MSG command. Messages are written to the VSE console.

- OPID  
PVMG/VSE will use the NONE option of the OPID record.
- PVMPROP  
Disabled due to the differences with the VSE operating system and SMSG not available.

## C.1.2 Configuration File Example

There is a sample PVMG configuration file in the "Defining Your PVMG Configuration" chapter of the *VM/Pass-Through Facility Administration and Operation* manual which can be used for planning and creating the PVMG/VSE configuration file. Shown below is a sample link statement between PVM and PVMG/VSE.

The following is a configuration file (PVMG CONFIG) showing a LINK statement to PVMG/VSE for the PVMG user ID.

```
*****
* Configuration file for the PVMG/VM side          *
*****
LANG AMENG
LOCAL PVM
:
LINK * PVMGVSE IUCV USER VSE
:
```

Figure 25. Sample Configuration File for the PVMG/VM Side

The following is a configuration JCL file (PVMGVSE JOB) showing a LINK statement to PVMG/VM for the VSE guest user ID.

```
*****
* Configuration file for the PVMG/VSE side        *
*****
LANG AMENG
LOCAL PVMGVSE
:
LINK * PVM IUCV USER PVM
:
```

Figure 26. Sample Configuration JCL for the PVMG/VSE Side

---

## C.2 Command Changes

This section will detail the changes to the PVMG command set from the VM environment to the VSE environment.

### C.2.1 Disabled Commands

The following commands will be disabled in PVMG/VSE since they are VM dependant only and there is not a corresponding VSE function. If any of these commands are encountered, the standard EFG045E message (*command* is not a valid command) or EFG056E message (Invalid subcommand *subcommand* on *command* command) will be returned.

- DISC

You can disconnect the VSE guest console by issuing '\* CP DISC'.

- INIT

JCL is created and executed to start the PVMGVSE JCL file.

- MSG

A MSG message to a VSE user is disabled in PVMG/VSE. The PVM/PVMG MSG message command to a PVM user within the PVM network is still allowed.

- SPOOL

Spooling is not valid under VSE.

- TRACE GTRACE

GTRACE is GCS specific, all other PVMG tracing will still be valid.

- SMSG

SMSG to PVMG/VSE has been disabled. Commands can be issued to PVMG from the VSE console or using the CMD command in the PVM network.

### C.2.2 Issuing Commands to PVMG/VSE

Commands from the PVM network can still be issued to PVMG/VSE using the CMD command. Issuing commands from the VSE console can be achieved using one of the following methods:

- MSG *partition id*

Where *partition id* is whatever partition PVMG/VSE is running in. VSE issues a message asking for a reply at which time the PVMG command can be issued

- MSG *partition id*, DATA=*command*

Where *partition id* is whatever partition PVMG/VSE is running in, and *command* is the PVMG command without any command prefix like is required on a GCS console.

---

## C.3 Installing PVMGVSE JCL on VSE

PVMG/VSE is available as SPE APAR VM57538 to PVM 2.1.1. Additional new files containing the PVMG/VSE function shipped on a CORrective service tape, or on an RSU, are targeted for the P684100E user ID's 400 minidisk, which include:

- PVMGVSE JCL which defines the Sublib PRD2.PVMGVSE and catalogs the code needed to run PVMGVSE. You can change this to any LIB.SUBLIB you choose. The Power JECL Job statement is set up with DISP=H.
- PVMGVSE MAP which contains the layout of the TEXT files included in PVMGVSE JCL.
- PVMGVSE JOBSAMP which contains a sample Job stream to run PVMGVSE. Please take note that you will need to change the LIBDEF statement if you change where the code is cataloged to. The Power JECL Job statement is set up with DISP=L. The PVMG/VSE configuration portion of this file will need updating by an installation before cataloging it to VSE. Before making any changes to this file, an installation should copy it as PVMGVSE JOB. See "Defining Your PVMG Configuration" in the *VM/Pass-Through Facility Administration and Operation* manual for details on modifying the configuration portion of this file.

To activate the PVMGVSE system wrap trace when initializing PVMGVSE, update the EXEC statement of the PVMGVSE JOB file to pass the TRACE command using the PARM operand. Adding the TRACE command to the EXEC statement as defined in PVMGVSE JOBSAMP would result in:

```
// EXEC PVMGVSE,SIZE=650K,PARM='TRACE'
```

For further information on the PARM operand or EXEC statement, see the *VSE/ESA System Control Statements*, manual.

The PVMGVSE JCL and PVMGVSE JOB files need to be sent to the VSE/ESA guest machine. Choose one of the following methods to accomplish this:

- Use PNET or what ever method you already have in place to submit these two Job's to the VSE/ESA guest machine.
- Use the SUBVSE EXEC that is shipped with VSE/ESA. For more information on using the SUBVSE EXEC, see SUBVSE.Z in the "Installing The VM/VSE Interface" chapter of *VSE/ESA Install and Service*, manual SC33-6054.
- Use the following steps:

On the VSE/ESA guest machine console:

1. Specify the class of the virtual reader

```
* cp spool rdr cl * cont nohold eof
```

Class of the VSE virtual reader will be specified when punching the files from VM.

2. Use the PSTART command to start the VSE/POWER reader task for the virtual reader from the VSE/ESA console

**s rdr, *cuu*, *cl***

*cuu* is the address of the virtual reader and *cl* is the class of the virtual reader.

From the P684100E virtual machine:

1. Set up the virtual punch to spool to the VSE/ESA guest

**spool pun cl *cl* to *userid***

*cl* is the class the files will be sent as, and *userid* is the virtual machine running VSE/ESA.

2. Punch PVMGVSE JCL and PVMGVSE JOB to the VSE/ESA guest

**pun PVMGVSE *ft* \* (noh**

*ft* would be JCL and JOB.

For further information, see the "Operating VSE/ESA Under VM" chapter of *VSE/ESA Operation*, manual SC33-6506.

PVMG/VSE must be defined to VSE/VTAM. Defining PVMG for VM is described in step 7 of 6.4.2.4, "Tailor the PVMG Server Virtual Machine" on page 42. Use this step as a guide when defining the similar VSE/VTAM configuration for PVMG/VSE.

For performance reasons, the \$\$BPRSUP,MOVE phase should be included in your SET SDL procedure. An example of this follows is:

```
* THE FOLLOWING LIBDEF IS FOR ACCESS TO THE PVMGVSE CODE
// LIBDEF PHASE,SEARCH=PRD2.PVMGVSE
SET SDL
$$BPRSUP,MOVE
/*
```

For further information on the SET SDL procedure, see the *VSE/ESA System Control Statements*, manual SC33-6513.

For the size of the partition to define for PVMG/VSE, see the section "How Much Storage is Needed for Your PVMG Server" in the "Administrating, Installing, and Operating PVM" chapter of the *VM/Pass-Through Facility Administration and Operation* manual. The PVMG/VSE application occupies 650K of the partition.

---

## C.4 New Versions of Existing Messages

This section lists only the new versions of existing PVMG messages. Existing PVMG messages are documented in the "PVMG and MPVM Numbered Messages" chapter of the *VM/Pass-Through Facility Messages*.

---

**047E**      **Return Code** *rc* from GETMAIN, **Descriptor Code** *dc*

**Return Code** *rc* from GETVIS, **Descriptor Code** *dc*

**Module:** PVMG

**Explanation:** An error occurred when PVMG/VM issued the GETMAIN macro or PVMG/VSE issued the GETVIS macro to request storage.

**System Action:** PVMG processing continues if the storage was for a non-critical function. If it could not get storage for a critical function, such as a line driver, PVMG terminates.

**Programmer Response:** Check storage requirements and increase the size of the PVMG or VSE virtual machine, if necessary. If the problem continues, note the codes indicated in the message and contact your IBM service representative.

---

**535E**      **Return Code** *rc* from IUCVCOM macro, **request function** *keyword*

**Return Code** *rc* from VSIUCV macro, **request function** *keyword*

**Module:** PVMG

**Explanation:** The function requested on the IUCVCOM or VSIUCV macro failed with the indicated return code.

**System Action:** None.

**Programmer Response:** None.

---

## Appendix D. Overriding the VMSYS File Pool Name

**Note!**

This procedure is only necessary for VM/ESA 1.2.1. For VM/ESA 1.2.2 and above, see "Changing the Shared File System Directory File Pool Name" section of the *VMSES/E Introduction and Reference* manual.

This section provides information to help you change the name of the file pool where PVM files will reside when PVM is installed using SFS directories.

During the VMFINS installation process, you're presented with an opportunity to override the default installation parameters defined in the 5684100E \$PPF file. If you choose to do this, the 'Make Override Panel' will be displayed, from which you can then change various installation parameters, including the SFS directory names used to organize the PVM files. However, this panel does not support changing the name of the file pool with which these directories are associated—VMSYS.

VMSYS is the IBM default name for a file pool that's intended to be used for system data and programs that are to be shared among users. See the *VM/ESA Planning and Administration* for more information about the VMSYS file pool and its characteristics.

If you intend to change *only* the VMSYS file pool name, you'll need to manually create a PPF override for the :DCL. section of the 5684100E \$PPF file *before* you install PVM, as described in 6.1.3, "Install PVM" on page 26.

If you intend to change the VMSYS file pool name in addition to other installation parameters, you should first create a PPF override file during the installation process to change those parameters, then modify the resulting \$PPF override file to account for the VMSYS-related changes.

**Note:** Do **not** modify the product supplied 5684100E \$PPF or 5684100E PPF files to change the VMSYS file pool name or any other installation parameters. If the 5684100E \$PPF file is serviced, the existing \$PPF file will be replaced, and any changes to that file will be lost; by creating your own \$PPF override, your updates will be preserved. This should be done after the install planning step, do not reissue that step.

The following process describes changing the default file pool name, 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 *fm2*

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

*fm2* is an appropriate file mode. If you create this file yourself, specify a file mode of A.

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

- 2** Create the override list

```
:OVERLST. PVMSFS PVMISFS PVMUSFS PVMSSFS
```

- 3** Create (or modify as required) the Variable Declarations (:DCL.) section for each override used when installing and servicing PVM. PVMISFS is used to install PVM, a sample :DCL. section is shown in step 3a. PVMSFS is used to service PVM, a sample :DCL. section is shown in step 3b on page 111. PVMUSFS is used to service PVM Uppercase English help files, a sample :DCL. section is shown in step 3c on page 111. PVMSSFS is used to install PVM source files, a sample :DCL. section is shown in step 3d on page 112.

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

```
:PVMISFS. PVMISFS 5684100E
:DCL. UPDATE
&INST191 DIR MYPOOL1:5684100E
&BASEZ DIR MYPOOL1:P684100E.PVM.PRODUCT
&SAMPZ DIR MYPOOL1:P684100E.PVM.SAMPLES
&DELTZ DIR MYPOOL1:P684100E.PVM.DELTA
&APPLX DIR MYPOOL1:P684100E.PVM.APPLY1
&APPLY DIR MYPOOL1:P684100E.PVM.APPLY2
&BLD6Z DIR MYPOOL1:P684100E.PVM.HELPAE
:EDCL.
:END.
```

(This override will update the :DCL. section of the PVMISFS override area of the 5684100E \$PPF file.)

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

```
:PVMSFS. PVMSFS 5684100E
:DCL. UPDATE
&INST191 DIR MYPPOOL1:5684100E
&BASEZ DIR MYPPOOL1:P684100E.PVM.PRODUCT
&SAMPZ DIR MYPPOOL1:P684100E.PVM.SAMPLES
&DELTZ DIR MYPPOOL1:P684100E.PVM.DELTA
&APPLX DIR MYPPOOL1:P684100E.PVM.APPLY1
&APPLY DIR MYPPOOL1:P684100E.PVM.APPLY2
&BLD6Z DIR MYPPOOL1:P684100E.PVM.HELPAEME
:EDCL.
:END.
```

(This override will update the :DCL. section of the PVMSFS override area of the 5684100E \$PPF file.)

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

```
:PVMUSFS. PVMUSFS 5684100E
:DCL. UPDATE
&INST191 DIR MYPPOOL1:5684100E
&BASEZ DIR MYPPOOL1:P684100E.PVM.PRODUCT
&SAMPZ DIR MYPPOOL1:P684100E.PVM.SAMPLES
&DELTZ DIR MYPPOOL1:P684100E.PVM.DELTA
&APPLX DIR MYPPOOL1:P684100E.PVM.APPLY1
&APPLY DIR MYPPOOL1:P684100E.PVM.APPLY2
&BLD6Z DIR MYPPOOL1:P684100E.PVM.HELPUCE
:EDCL.
:END.
```

(This override will update the :DCL. section of the PVMUSFS override area of the 5684100E \$PPF file.)

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

```
:PVMSSFS. PVMSSFS 5684100E
:DCL. UPDATE
&INST191 DIR MYPOOL1:5684100E
&BASEZ DIR MYPOOL1:P684100E.PVM.PRODUCT
&BAS1Z DIR MYPOOL1:P684100E.PVM.SOURCE
&SAMPZ DIR MYPOOL1:P684100E.PVM.SAMPLES
&DELTZ DIR MYPOOL1:P684100E.PVM.DELTA
&APPLX DIR MYPOOL1:P684100E.PVM.APPLY1
&APPLY DIR MYPOOL1:P684100E.PVM.APPLY2
&BLD6Z DIR MYPOOL1:P684100E.PVM.HELPAE
:EDCL.
:END.
```

(This override will update the :DCL. section of the PVMSSFS override area of the 5684100E \$PPF file.)

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

**file**

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

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

**vmfppf** *overname compname*

where *overname* is the file name of your \$PPF override file, and *compname* is **PVMISFS**, **PVMSFS**, **PVMUSFS**, and **PVMSSFS**. Each override created in step 3 on page 110 must be compiled.

- 6 Update the IPL directory control statement in the P684100E directory entry:

```
IPL CMS PARM FILEPOOL MYPOOL1
```

This will cause CMS to access the P684100E's top directory as file mode A using the MYPOOL1 file pool name instead of VMSYS.

Now that the *overname* PPF file has been created, you should specify *overname* instead of 5684100E as the PPF name to be used for those VMSES/E commands that require a PPF name.

---

## Appendix E. PVMG Enhancements provided in SPE VM58551

This SPE provides the following enhancements to the PVMG SNA gateway facility for VM and VSE:

1. Support for PVM cross system IUCV sessions (PVMG/VM only).
2. Allow SNA applications to be selected from the PVMG selection screen.
3. Addition of an APPLN command and APPLN option on the QUERY command.
4. Allow trace entries to be written to the PVMG console for capture by CP spooling (PVMG/VM only).
5. Addition of a retry facility to reestablish communications with VTAM when the connection with VTAM has been disrupted. PVMG will attempt to reopen communications every 30 seconds until successful or an unrecoverable error is detected. During this time, any session initiation requests to an SNA application will be rejected by PVMG. PVMG can be shutdown during this time, but may take longer since PVMG is in a 30 second wait loop.

The following enhancements have also been made to the PVM server:

1. Toleration of any accessed shared file system directories
2. Issue an error message if the IUCV declare buffer fails to warn an installation IUCV is not available to PVM.

---

### E.1 PVM Cross System IUCV Support in PVMG/VM Overview

This SPE adds support to the PVMG for VM component of the VM/Pass-Through Facility for routing cross system IUCV sessions. Cross system IUCV sessions in PVM allow an application to communicate with another application on the same VM node or another VM node within the PVM network using IUCV. For further details on this support in PVM, see *VM/Pass-Through Facility Administration and Operation*.

Since PVM cross system IUCV sessions are from one VM user ID to another through the PVM network, both VM nodes of the session must be using PVM. Until now, these IUCV sessions were not allowed to pass through a SNA network via a PVMG intermediate gateway node.

In order for PVMG to support these IUCV sessions, the remote SNA application PVMG passes them on to must in fact be another PVMG gateway. This SPE introduces a new optional IUCV parameter to the APPLN configuration file record indicating to PVMG that the supplied SNA application name is the name of another PVMG gateway from which the specified target VM node can be reached for IUCV sessions. Here is an example:

```
APPLN GDLVM7 N2E7AVSC
APPLN GDLVM7 N2ECAPLW IUCV
```

The first APPLN record defines an SNA application, for example VSCS, with a node name of GDLVM7. When a PVM terminal user selects node GDLVM7, PVMG will establish a session with SNA application N2E7AVSC. But, if a VM application wishes to communicate with another VM application running on node

GDLVM7 via IUCV, this can be accomplished using the second example. Application name N2ECAPLW is another PVMG gateway in the SNA network, and PVM node name GDLVM7 must be reachable from this gateway. An installation will need an APPLN record for each target node name reachable from an SNA network by cross system IUCV sessions.

---

## E.2 PVMG Selection Screen Enhancements

Session initiation when accessing PVMG from an SNA network for terminal support has been enhanced. A user can now select a node which is actually an SNA application and PVMG will pass the session on to the SNA application. Previously, only PVM node names could be selected from the PVMG selection screen. When a user selects a node from the PVMG selection screen, PVMG will scan its internal tables to determine how to pass the session request on to PVM or VTAM in the following order:

- Passed on to PVM if target node is defined via a link or route
- Passed on to VTAM if target node is defined as an APPLN. This is new, previously PVMG did not do this.
- Passed on to PVM node listed as the default route.

This means if a node is defined both as a route and APPLN, the route will take precedence. Also, nodes defined as APPLN's will now be part of the node list on the PVMG selection screen. The order of nodes will be links in alphabetical order, followed by nodes defined as routes in alphabetical order, finally followed by nodes defined as APPLNs in alphabetical order. Nodes defined as APPLNs can be defined as PF keys now via the SELECT configuration file record or command.

If an SNA user would like to reach an SNA destination from the PVMG selection screen, but the node is not listed, they can now simply type the name of the SNA application as the PVM node name and type **TOSNA** as the alternate route, and PVMG will pass the session on to the SNA application.

Allowing a session to be connected to an SNA application when selected from the PVMG selection screen enables PVMG to be used as a session concentrator. SNA terminals can be attached to the PVMG application; from there a user can select a session which may reside in either the PVM network or the SNA network.

---

## E.3 PVMG Command Enhancements.

To assist in maintaining the PVMG APPLN tables, an APPLN command has been added for dynamically updating this table, and an APPLN option has been added to the query command to view the SNA application names assigned to PVM node names.

Also enhanced is the TRACE command to allow the internal trace records to be written to the console for capture via CP spool.



### E.5.1.2 Operands

**name**

is the name associated with a VTAM application name to be added, deleted, or modified.

**TO *applid***

indicates that the target node can be accessed as VTAM application *applid*.

**OFF**

removes the specified target node from the routing table.

**IUCV**

Tells PVMG that for a cross system IUCV session the target PVM node name as defined by *name* can be reached via the PVMG node at application name *applid*. This option is used for cross system IUCV sessions and is applicable to PVMG/VM only.

### E.5.1.3 Usage Notes

1. This command is restricted to the PVMG operator or an alternate operator specified on an AUTHORIZ record in the PVMG configuration file.
2. When issued from another virtual machine using SMSG, you can use a command prefix with this command to tell PVMG how to respond to the command.

---

## E.6 PVMG Command Changes

The following are updates made to existing PVMG commands in this SPE. Only the new parameters are described here, all other parameter descriptions can be found in appendix E of *VM/Pass-Through Facility Administration and Operation*.

### E.6.1 APPLN Option of QUERY Command

Described here only is a new APPLN option, for a full description of the PVMG QUERY command, see appendix E of *VM/Pass-Through Facility Administration and Operation*.

►►—QUERY—APPLn—*node id*—IUCV—►►

#### E.6.1.1 Purpose

Use the QUERY command to display contents of the APPLN routing table.

## E.6.1.2 Operands

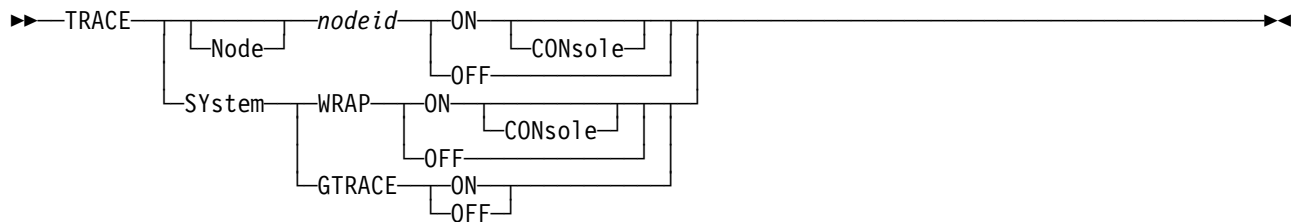
### APPLn

displays the contents of the PVMG server's APPLN routing table for a particular node name. The VTAM application name associated with *nodeid* will be displayed.

### IUCV

indicates to search the IUCV APPLN routing table for the particular node name. The VTAM name for a PVMG application by which the *nodeid* can be reached will be displayed. This option is used for cross system IUCV sessions and is applicable to PVMG/VM only.

## E.6.2 TRACE Command



## E.6.2.1 Operands

### CONSOLE

Specifies that in addition to writing to the wraparound tables, the trace records should also be written to the PVMG console. This option is applicable to PVMG/VM only.

---

## E.7 New PVMG Messages

This section lists only new versions of existing PVMG messages, and new PVMG messages added by this SPE. Existing PVMG messages are documented in the "PVMG and MPVM Numbered Messages" chapter of the *VM/Pass-Through Facility Messages*.

- 
- 088I** *onodeid* *clusterid* *userid* *onodeid* *sessid* *devid* **Device** *rdev* *dtype* **Model** *model* *features* **is in session at** *dnodeid* *ldev*, **Bytes In** *obytes* **Out** *dbytes*
- onodeid* *userid* *devid* **Device** *rdev* *dtype* **Model** *model* *features* **is in session at** *dnodeid* *ldev*, **Bytes In** *obytes* **Out** *dbytes*
- onodeid* *userid* *opathid* **is in session at** *dnodeid* *ldev* *dpathid*, **Bytes In** *obytes* **Out** *dbytes*
- onodeid* *clusterid* *userid* *onodeid* *sessid* *devid* **Device** *rdev* *dtype* **Model** *model* *features* **is in session at** *dnodeid* *ldev*
- Application** *applid*, **Logical unit** *luname*, **Bytes In** *obytes* **Out** *dbytes*
- onodeid* *userid* *devid* **Device** *rdev* *dtype* **Model** *model* *features* **is in session at** *dnodeid* *ldev*

**Application** *applid*, **Logical unit** *luname*, **Bytes In** *obytes* **Out** *dbytes*  
*onodeid userid opathid is in session at dnodeid userid dpathid*  
**Application** *applid*, **Logical unit** *luname*, **Bytes In** *obytes* **Out** *dbytes*

**Module:** PVMG.

**Explanation:** In response to a QUERY QUEUE or QUERY USER command, information about the indicated PVMG session is displayed.

For a R3270 session, the origin information includes the node ID of the R3270 link, local PVMG node ID, and the cluster or port value. For MPVM sessions, the origin information includes the user's origin node ID, user ID, and session ID. For other sessions, the node ID and user ID of the user are displayed. The destination information includes the node ID and user ID of the user.

The *features* value indicates the 3270 extended features the device supports. If a device does not have an explicit model number (for example, 3270 printer devices), the model number is displayed as 0. Input and output byte counts are also displayed for the session.

**System Action:** None.

**User Response:** None.

---

**089I** **Node** *nodeid* **is routed through** *linkid*  
**Node** *nodeid* **is routed to VTAM application** *applid*

**Module:** PVMG

**Explanation:** Routing information is displayed in response to a QUERY APPLN, QUERY ROUTE, or QUERY NODE command.

**System Action:** None.

**User Response:** None.

---

**094I** **TRACE SYSTEM GTRACE** *gstat* **WRAP** *wstat*  
**TRACE SYSTEM GTRACE** *gstat* **WRAP** *wstat* **CONSOLE** *cstat* **Address** *addr*

**Module:** PVMG.

**Explanation:** The current trace settings for the system are displayed in response to a QUERY TRACE command. This includes whether trace entries are written to the PVMG console, and the address of the start of the system wrap around table.

**System Action:** None.

**User Response:** None.

---

**097I** **TRACE NODE** *linkid status*  
**TRACE NODE** *linkid status* **CONSOLE** *cstat* **Address** *addr*

**Module:** PVMG

**Explanation:** The trace settings for a link are displayed in response to a QUERY TRACE command. This includes whether trace entries are written to the PVMG console, and the address of the start of the node wrap around table.

**System Action:** None.

**User Response:** None.

---

**102I**      **Session start from** *onodeid userid\devid\luname to dnodeid applid\ldev*  
**Session start from** *onodeid\clusterid userid\onodeid sessid\devid to dnodeid applid\ldev*  
**Session start from** *onodeid userid\devid\luname to dnodeid applid\ldev, application applid, logical unit luname*  
**Session start from** *onodeid\clusterid userid\onodeid sessid\devid to dnodeid applid\ldev, application applid, logical unit luname*  
**Session start from** *onodeid userid opathid to dnodeid userid\lpathid, application applid, logical unit luname*

**Module:** PVMG

**Explanation:** A session has been established for the application at the indicated node.

**System Action:** Processing continues.

**User Response:** Start activities on the session, as needed.

---

**103I**      **Session ended from** *onodeid userid\devid\luname to dnodeid applid\ldev*  
**Session ended from** *onodeid\clusterid userid\onodeid sessid\devid to dnodeid applid\ldev*  
**Session ended from** *onodeid userid\devid\luname to dnodeid applid\ldev, application applid, logical unit luname*  
**Session ended from** *onodeid\clusterid userid\onodeid sessid\devid to dnodeid applid\ldev, application applid, logical unit luname*  
**Session ended from** *onodeid userid opathid to dnodeid userid\lpathid, application applid, logical unit luname*

**Module:** PVMG

**Explanation:** The indicated session from PVMG to PVM, from PVM to PVMG, or from PVM to PVM, has ended.

**System Action:** PVMG processing continues and the session ends.

**User Response:** If necessary, attempt to re-establish the session.

---

**515I**      **Session for logical unit** *luname is being passed to VTAM application applid*

**Module:** PVMG.

**Explanation:** A node has been selected from the PVMG selection screen which is actually an SNA application. PVMG is in the process of passing on the terminal session to the application. PVMG will no longer have control over the logical unit.

**System Action:** None.

**User Response:** None.

---

## Appendix F. Defining Remote BSC Devices to PVM

This Appendix shows how to convert terminal and printer devices attached to a remote 3270 Bi-Sync (BSC) control unit from being CP owned in VM/SP, VM/HPO, and VM/ESA (1.1.0 370 feature and 1.5.0) to being PVM owned in VM/ESA (1.1.1 and above).

---

### F.1 Defining Remote 3270 Devices using DMKRIO

In a VM/SP, VM/SP HPO, or VM/ESA (1.1.0 370 feature and 1.1.5) system, I/O devices, control units, and channels that are attached to the real processor were defined in the real I/O configuration file called DMKRIO.

Figure 27 shows sample statements that define devices and connections in a DMKRIO similar to what you may have had defined.

RIO	TITLE
DMKRIO	CSECT
1	CLUSTR22 CLUSTER CUTYPE=3274,GPOLL=407F,LINE=022
2	TERMINAL TERM=3279,SELECT=6040,MODEL=3
	TERMINAL TERM=3279,SELECT=60C1,MODEL=3
	TERMINAL TERM=3279,SELECT=60C2,MODEL=3
	TERMINAL TERM=3278,SELECT=60C3,MODEL=2
	TERMINAL TERM=3278,SELECT=60C4,MODEL=3
	TERMINAL TERM=3284,SELECT=60C5,MODEL=2
	TERMINAL TERM=3287,SELECT=60C6,MODEL=1
	TERMINAL TERM=3289,SELECT=60C7,MODEL=1
	:
3	RDEVICE ADDRESS=022,DEVTYPE=3705,ADAPTER=BSCA,BASEADD=020, C CLUSTER=CLUSTR22

Figure 27. Sample Statements That Define Devices and Connections (DMKRIO ASSEMBLE)

#### Notes:

1. Defines a cluster associated with the remote 3274 control unit with an address of 0 (as defined by the hardware) and line address of 022 (as attached to a processor channel).
2. Defines the resource identification code of the remote terminals and printers. The sequential position of the CLUSTER and TERMINAL statements in the file determines addressing. The first CLUSTER statement is address 0nn; the TERMINAL statements following are 001 through 0FF, and so on. This cluster has 5 terminals and 3 printers defined to it.
3. Defines the address in the TCU (Telecommunication Control Unit) of the line to the remote 3270's cluster control unit. This is the address as defined to VM. The address must also be defined in an EP (Emulator Program) generation of the 37xx TCU. See the appropriate remote 3270 control unit documentation for defining and generating this EP. The CLUSTER parameter refers to the CLUSTR22 statement (earlier). The ADDRESS parameter and the CLUSTER statement's LINE parameter specify the same address, 022.

For a more detailed explanation of DMKRIO and the macros used with it, see the *VM/ESA CP Planning and Administration for 370* book.

## F.2 Defining Remote 3270 Devices to VM/ESA and PVM

In a VM/ESA (1.1.0 ESA feature, and 1.1.1 and above) system, I/O devices, control units, and channels that are attached to the real processor are defined in the real I/O configuration file called HCPRIO or the SYSTEM CONFIG file (available on VM/ESA 1.2.0 and above). This section will show the definitions necessary for the remote 3270 control unit, that had been defined in the DMKRIO ASSEMBLE file, in the HCPRIO ASSEMBLE file or the SYSTEM CONFIG file and in the PVM CONFIG file.

Figure 28 shows sample statements in HCPRIO based on the remote 3270 control unit which was defined in Figure 27 on page 120.

```

RIO TITLE 'HCPRIO - VM/ESA (1.1.0 ESA FEATURE, AND 1.1.1+)'
PRINT NOGEN
*****
* THIS STARTS THE RDEVICE MACROS FOR LOGICAL CHANNEL 0 *
*****
:
*****
* LOGICAL CHANNEL 0 TYPE (BY) LOCAL OPS CONSOLES AND PRINTERS *
*****
1 RDEVICE DEVNO=(0021,10),DEVTYPE=3279,MODEL=3
*
* 3705 #1 NSC #1 00F0 ESC 0040-004F
*
2 RDEVICE DEVNO=(0040,16),DEVTYPE=3705,ADAPTER=BSCA, X
BASEADD=00F0
:
RDEVICE DEVNO=00F0,DEVTYPE=3705,ADAPTER=TYPE4,MODEL=4
*****
* THIS ENDS THE RDEVICE MACROS FOR LOGICAL CHANNEL 0 *
*****
:
*****
* RIOGEN MACRO COMPLETES RIO DEFINITION AND DEFINES PRIMARY *
* AND ALTERNATE SYSTEM CONSOLES *
*****
3 RIOGEN CONS=0021,ALTCONS=(0022,0023,0024,0027,0030)

```

Figure 28. Sample Statements That Define Devices and Connections (HCPRIO ASSEMBLE)

### Notes:

1. Defines the device addresses of 7 consecutive 3279 Model 3 displays with addresses starting at 0021.
2. Defines the device addresses of 16 consecutive 3705 line adapters. The ADAPTER operand specifies the line protocol to be used (BSC). **Note:** CLUSTER AND TERMINAL macro's are not supported in HCPRIO, you now must use the CLUSTER and CLPORT records in the PVM CONFIG file to define the devices connected to the remote 3270 control unit. See Figure 30 on page 123 for an example of defining these devices to PVM.

3. Completes the real I/O definition and defines the primary and alternate system consoles. The primary system console is defined at address 0021 (the first of the 7 consecutive 3279 Model 3 displays from Note 1). The 5 alternate system consoles are defined at addresses 0022 through 0024 (also from the displays described in Note 1) and at addresses 0027 and 0030.

For a more detailed explanation of HCPRIO and the macros used with it, see the *VM/ESA: Planning and Administration* book.

**Note!**

The last VM/ESA release to support HCPRIO ASSEMBLE will be 1.2.2. These devices can alternatively be defined in the SYSTEM CONFIG file of VM/ESA 1.2.0 and above. see Figure 29 for an example of defining the remote 3270 control unit in the SYSTEM CONFIG file.

```

/*-----*
 * Sample SYSTEM CONFIG file definitions          *
 *-----*/
/*-----*
 * This starts the RDEVICE statements for logical channel 0 *
 *-----*/
      :
/*-----*
 * LOGICAL CHANNEL 0 TYPE (BY) LOCAL OPS CONSOLES AND PRINT *
 *-----*/
1  RDEVICE 0021-0030 TYPE 3279 MODEL 3
/*-----*
 *      3705 #1   NSC #1 00F0   ESC 0040-004F      *
 *-----*/
2  RDEVICE 0040-004F TYPE BSC_ADAPTER
      :
RDEVICE 00F0 TYPE 3705
/*-----*
 *      THIS ENDS THE RDEVICE MACROS FOR LOGICAL CHANNEL 0 *
 *-----*/
      :
/*-----*
 * Define primary and alternate system consoles          *
 *-----*/
3  OPERATOR_CONSOLES 0021 0022 0023 0024 0027 0030

```

Figure 29. Sample Statements That Define Devices and Connections (SYSTEM CONFIG)

**Notes:**

1. Defines the device addresses of 7 consecutive 3279 Model 3 displays with addresses starting at 0021.
2. Defines the device addresses of 16 consecutive 3705 line adapters. The TYPE operand specifies the line protocol to be used (BSC). **Note:** CLUSTER AND TERMINAL macro's are not supported in the SYSTEM CONFIG file, you must use the CLUSTER and CLPORT records in the PVM CONFIG file to define the devices connected to the remote 3270 control unit. See Figure 30 on page 123 for an example of defining these devices to PVM.
3. Completes the real I/O definition and defines the primary and alternate system consoles. The primary system console is defined at address 0021 (the first of the 7 consecutive 3279 Model 3 displays from

Note 1). The 5 alternate system consoles are defined at addresses 0022 through 0024 (also from the displays described in Note 1) and at addresses 0027 and 0030.

For a more detailed explanation of SYSTEM CONFIG file statements, see the *VM/ESA: Planning and Administration* book.

## F.2.1 Sample CLUSTER and CLPORT PVM Configuration Files Statements

The following is a sample configuration file for PVM showing the use of the CLUSTER and CLPORT records (which replace the CLUSTER and TERMINAL statements of DMKRIO ASSEMBLE). For complete descriptions of these records and PVM in general, see *VM/Pass-Through Facility Administration and Operation*.

```

:
* Set up a link for a Remote 3270 cluster and provide a link name
* such as REM3270 in this example
LINK 0B0 REM3270 R3270
* Specify that the Remote 3270 control unit at address 0 has
* a maximum of 8 ports
CLUSTER 0 8 3274E
* Define the ports available to REM3270
CLPORT 00 3279-3
CLPORT 01 3279-3
CLPORT 02 3279-3
CLPORT 03 3278-2
CLPORT 04 3278-3
* Define the sixth port on line 0B0 to be a 3284 printer who will be
* attached to the PVM emulator node called MVSTS0 at port 3.
CLPORT 05 3284 MVSTS0 3
* Define the seventh port on line 0B0 to be a 3287 printer who will
* be attached to virtual machine ID RSCS at virtual address 0C0 on
* PVM node RMTVPVM1. L000 is used as the PVM logical device address at
* RMTVPVM1 so that CP will default to the next available logical device
* address defined as a printer.
CLPORT 06 3287 RMTVPVM1 L000 RSCS 0C0
* Define the eighth port on line 0B0 to be a 3289 printer who will
* be attached to virtual machine ID RSCS at virtual address 0C1 on
* PVM node RMTVPVM1. L000 is used as the PVM logical device address at
* RMTVPVM1 so that CP will default to the next available logical device
* address defined as a printer.
CLPORT 07 3289 RMTVPVM1 L000 RSCS 0C1
:

```

Figure 30. Sample CLUSTER and CLPORT Statements

## F.2.2 Steps to Define a Remote 3270 in VM/ESA

Below are steps to take for defining remote 3270 control units to VM and PVM in a VM/ESA (1.1.0 ESA feature and 1.1.1 and above) system.

### Note!

The NETWORK command is no longer supported in VM/ESA. PVM supports some of the NETWORK command options as follows:

- The ATTACH option for attaching a printer device to a virtual machine is done automatically by PVM if that virtual machine has class B authority.
- The DETACH option for detaching a printer device from a virtual machine is done automatically by CP when the printer session ends.
- The DISABLE option can be accomplished using the PVM DROP command
- The ENABLE option can be accomplished using the PVM START command.
- The LOAD option for loading an EP 3704/3705 control program is not supported by PVM. The line which controls this must be attached to another application which does support it.
- The QUERY option can be accomplished using the PVM QUERY command.
- The VARY option for varying the status of remote devices on and off line can be accomplished using the PVM VARY command.

1. Define your remote 3270 control units to CP in HCPRIO ASSEMBLE or the SYSTEM CONFIG file.
2. Attach these devices to the PVM virtual machine ID.
3. Define a LINK record in the PVM CONFIG file for each line you attached to PVM. Also add a START command in the PROFILE PVM file for each LINK record.
4. Use CLUSTER records in the PVM CONFIG file to define the clusters on each remote 3270 control unit. CLUSTER records must follow each R3270 type LINK record.
5. Use CLPORT statements in the PVM CONFIG file to define the devices on each cluster. CLPORT records must follow each CLUSTER record.
6. For printers, you must take the following into consideration:
  - Define to PVM via the CLPORT record's *nodeid* and *vmid* optional parameters the application which will be sending output to the printer (application being RSCS, or a 3270 emulator such as VTAM or MVS, or another print application). *nodeid* is the PVM node ID where the application can be reached. *vmid* is the VM user ID of a VM system printer application (not used for a 3270 emulator printer application).
  - If the destination node is a VM system printer application, then the PVM machine at the target node should have class B authority to do a CP attach. It is suggested to use L000 for the CLPORT *addr* optional parameter. This parameter defines the logical device address on the

target PVM machine which is defined as a printer. If this is left as L000, CP will select the next logical device defined as a printer. This avoids the situation where another printer or terminal session could already be using that logical device when PVM starts this printer session.

- If the destination node is a PVM emulator node, then the CLPORT *addr* optional parameter defines the specific port address for this printer session.
- If the destination node is a VM system printer application, then define, in that applications virtual machine, a virtual device as a printer session which PVM can attach, specifying this address to PVM using the CLPORT *vaddr* optional parameter. You must also define a printer session to the printer application, for example in RSCS you must define a 3270P printer session.

---

## Appendix G. PVM Server Enhancements provided in SPE VM60644

This SPE provides the following enhancements to the PVM server:

1. Multiple session capability when DIALing the PVM server (YVETTE like function)
2. Addition of a DELETE command
3. Addition of a BUF *nn* option on the START GRAF command.

The following enhancements have also been made to the PVMG server:

1. Issue an error message when an IUCV SEVER is received on the IUCV link to PVM. This message will include the 16-byte IPUSER field of the IUCV IPARML to indicate why the SEVER occurred.

---

### G.1 Multiple Session Capability When DIALing PVM

The selection screen displayed when DIALing the PVM server has been slightly altered and will now look as shown in Figure 31 on page 127.

```

VM/Pass-Through Facility

You can select a node with the cursor and press ENTER

L RMTPVM1    G RMTPVM2    G RMTPVM5    S VSEAPL    S MVSTSO    N PVMG1
N RMTPVM3    R RMTSYS2    RMTPVM3     RMTSYS6    VMCMS

Destination ----->          Port ----->
Route ----->          Language -----> AMENG
End Session -----> #####    Verify -----> OFF
Your Identification -----> GRAF200 Nickname ----->
Session Roll -----> ?SELECT Menu Select -----> ?MENU
PF8= Scroll          CLEAR key = Top Screen          PA1= Exit
PF1=RMTPVM1  PF2=VSEAPL  PF3=MVSTSO  PF4=RMTPVM3  PF6=RMTPVM5

****>                                     <****
****>                                     <****

```

Figure 31. Sample screen displayed after DIALing PVM

Three new fields have been added to the PVM selection screen which are displayed only when DIALing PVM. These fields are not included when the selection screen is produced other than when DIALing PVM. The new fields are:

1. NICKNAME

To provide a unique name for each session, If a nickname is not provided it will default to the nodename. To start multiple sessions with the same node, provide a unique nickname for each session. From the selection menu, you can type an existing nickname in the 'Destination' field and press enter, or press the PFkey assigned to that nickname, to select that session.

2. SESSION ROLL

A string/key used to roll from one session to the next, or to select a particular nickname. Entering this character string (which is case sensitive) (or pressing the assigned PA or PF key) will cause the next session to be displayed. If SESSION ROLL is defined as a string, entering that string followed by a nickname (such as ?ROLL *nickname*) while viewing one session will select that particular session instead of the next one in the ring.

### 3. MENU SELECT

A string/key used to display the PVM selection screen. Entering this character string (which is case sensitive) (or pressing the assigned PA or PF key) will cause the PVM selection screen to be displayed.

In addition, the following externals changes have been made to support the new DIAL capability:

- Number of DIAL PVM users is limited to the number of graphic devices started
- Number of sessions per DIAL user is limited by the MAXSESS Configuration file record, default is 5.
- The Q MPVM command displays results for the number of DIAL sessions.
- Unused PF keys on the PVM selection screen will be filled in with nicknames.
- Nicknames will be displayed on the PVM selection screen ahead of the nodename list.

---

## G.2 PVM Command Enhancements.

To assist in maintaining the PVM network, a DELETE command has been added for dynamically removing nodes.

Also enhanced is the START GRAF command to avoid possible performance degradation when uploading files while using the DIAL PVM support. A new **BUF** *nn* parameter has been added to define the minimum number of 4096-byte buffers PVM should use when issuing read operations to a users terminal. The performance degradation, which can occur when uploading files from a workstation while using the DIAL PVM support, happens when the PVM server issues a read operation with a buffer size of 4096 bytes. If an overflow would occur (such as when uploading data from a PC), PVM will have to reissue the read operation with the corrected data byte count. When uploading data from a PC, this will cause 2 reads to be issued for every data packet the PC sends.

---

## G.3 New PVM Commands

The following are new commands added in this SPE.

### G.3.1 DELETE Command

▶▶—DELETE—*nodeid*—▶▶

#### G.3.1.1 Purpose

DELETE causes a previously defined link to become temporarily undefined. Permanent deletion of a link can be made only by removing the LINK definition from the PVM configuration file. When entering the DELETE command, the link you are deleting must be inactive (have a status of DOWN).

### G.3.1.2 Operands

*nodeid*

Is the one- to eight-character name of the link to be undefined.

### G.3.1.3 Usage Notes

1. If there are any routes to the link to be deleted, each route will be removed with a message issued indicating deletion.
2. If the link to be deleted is part of a group and there are no other links in the group, the group will be removed.
3. This command is restricted to the PVM operator or an alternate operator specified on an AUTHORIZ record in the PVM configuration file.
4. When issued from another virtual machine using SMSG, you can use a command prefix with this command to tell PVM how to respond to the command.

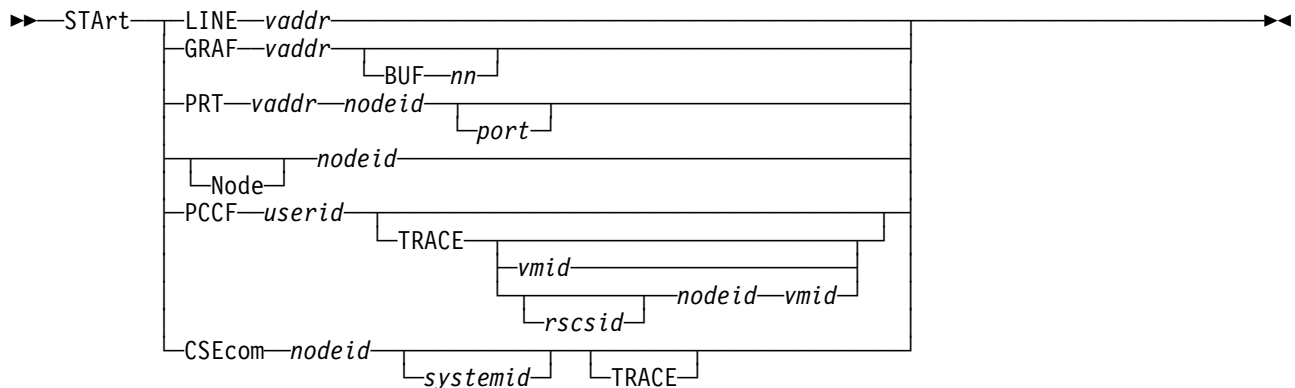
---

## G.4 PVM Command Changes

The following are updates made to existing PVM commands in this SPE. Only the new parameters are described here, all other parameter descriptions can be found in appendix C of *VM/Pass-Through Facility Administration and Operation*.

### G.4.1 BUF Option of START Command

Described here only is a new BUF option, for a full description of the PVM START command, see appendix C of *VM/Pass-Through Facility Administration and Operation*.



### G.4.1.1 Purpose

The PVM operator uses the START command (a restricted command) to start:

- A line driver task to a PVM virtual machine
- An IUCV line driver task to a PVMG virtual machine
- An attached display support task
- An attached printer support task
- A PCCF support task
- A CSE communication task.

### G.4.1.2 Operands

**BUF** *nn*

is the number, from 1-15, of **extra** 4096-byte buffers the DIAL support should obtain prior to issuing read commands to a users terminal.

---

## G.5 New PVM Unnumbered Messages

This section lists only new versions of existing PVM unnumbered messages, and new PVM unnumbered messages added by this SPE. Existing PVM unnumbered messages are documented in the "PVM Unnumbered Messages" chapter of the *VM/Pass-Through Facility Messages*.

---

*key is not a valid termination key*

**PF OR PA KEY INCORRECT - KEY IGNORED**

*key is not a valid session roll key*

**PF OR PA KEY INCORRECT - KEY IGNORED**

*key is not a valid menu select key*

**PF OR PA KEY INCORRECT - KEY IGNORED**

**Explanation:** You did not specify a valid PF or PA key as the session termination, session roll, or menu select key. Valid keys are PF1 through PF24, PA1 through PA3.

**User Response:** Specify a valid number for the PF or PA key.

---

**You are using** *value* **for temporary disconnect**

**You are using** *value* **for session terminate**

**You are using** *value* **for session roll**

**You are using** *value* **for menu select**

**Explanation:** The value you specified on the PVM Selection menu for either the:

- session termination string
- session roll string, or
- menu select string

is the same as the string specified for either the:

- temporary disconnect string (specified on the PASSTHRU command).

- session termination string
- session roll string, or
- menu select string

**User Response:** Specify a different string for session termination, session roll or menu select, or use the default values. To change the temporary disconnect string, leave the PVM Selection menu and enter the PASSTHRU command again.

**Requested logical unit *luname* is not available**  
**LOGICAL UNIT *luname* NOT AVAILABLE**

**Explanation:** The logical unit name specified when starting an MPVM session was either in use or not defined at the PVMG node the session was going through.

**System Action:** The session is not started.

**User Response:** If you need to use the logical unit name, contact your system administrator.

## G.6 New PVM Messages

This section lists only new versions of existing PVM messages, and new PVM messages added by this SPE. Existing PVM messages are documented in the "Numbered PVM Messages" chapter of the *VM/Pass-Through Facility Messages*.

**645I**      **MPVM user *userid* has *nn* sessions**  
              **DIAL user *userid* has *nn* sessions**

**Module:** PVM

**Explanation:** The number of sessions for the indicated MPVM or DIALed user ID are displayed in response to a QUERY USER command. This message is followed by a status message for each session.

**System Action:** None.

**User Response:** None.

**647E**      **MPVM user *userid*, Session *sessid*, Return Code *rc*, subcode *sc*, from EFGIMA**  
              **MPVM user *userid*, Return Code *rc*, subcode *sc*, from EFGIMA**  
              **DIAL user *userid*, Session *sessid*, Return Code *rc*, subcode *sc*, from EFGIMA**  
              **DIAL user *userid*, Return Code *rc*, subcode *sc*, from EFGIMA**

**Module:** PVM

**Explanation:** VM/Pass-Through Facility received an error as the screen image handler attempted to update a screen image or attempted to create a buffer containing write structured field data that is used to reply to an application's request for QUERY-REPLY information. The return codes have the following meanings:

- 2 VM/Pass-Through Facility requested a function requiring an opened screen image, but it has not opened the image.

- 1 The requested function is not defined to the screen image handler.
- 1 A 3270 orders check occurred.
- 2 VM/Pass-Through Facility did not provide a buffer for returning data.
- 3 VM/Pass-Through Facility did not provide query reply information for a write structured field function request.
- 5 VM/Pass-Through Facility did not provide required terminal information.
- 10 The buffer VM/Pass-Through Facility provided is too small.
- 25 The screen image handler encountered a CMS storage error.
- 30 VM/Pass-Through Facility and MPVM screen image handlers not at the same level.
- 32 The screen image handler has detected a screen size discrepancy.

The subcode field is reserved for IBM service use as an aid for determining where the error occurred in the screen image handler.

**System Action:** The user session ends.

**Programmer Response:** If the problem persists, start local diagnostic procedures.

**648I**      **Current MPVM users** *nn*, **highest** *maxnn*  
**Current MPVM sessions** *mm*, **highest** *maxmm*  
**Current DIAL sessions** *mm*, **highest** *maxmm*

**Module:** PVM

**Explanation:** The number of current MPVM users and total sessions are displayed in response to a QUERY MPVM command. The message also displays the largest number of MPVM users and largest total number of MPVM user sessions that are active at any time. The message also displays the current and largest number of DIALed sessions.

**System Action:** None.

**User Response:** None.

## G.7 New PVMG Messages

This section lists only new versions of existing PVMG messages, and new PVMG messages added by this SPE. Existing PVMG messages are documented in the "PVMG and MPVM Numbered Messages" chapter of the *VM/Pass-Through Facility Messages*.

**737E**      **Link** *linkid* **IUCV SEVER, IPUSER data is** *ipuser*

**Module:** PVMG

**Explanation:** An unexpected asynchronous IUCV SEVER was received by the indicated link. The IPUSER data field from IUCV is included and may contain more information as to why the SEVER occurred.

**System Action:** The line driver task ends. PVMG will restart the link.

**Programmer Response:** If the problem persists, start local diagnostic procedures.

---

## Appendix H. PVM Server Enhancements provided in SPE VM61373

This SPE provides the following enhancements to the PVM product:

1. Support within the PVM and CVIEW servers for expanded logical device addressing (4096 to 32768) provided by VM/ESA 2.3.0.
2. Incorporation of the MPVM screen handler within the DVMUSI module enabling users to receive MSG and WNG messages on the user ID from which PASSTHRU was issued. The MPVM screen handler provides the following advantages:
  - The terminal will now properly refresh when a warning message has been displayed, previously the terminal may have hung.
  - The ability to allow messages sent to your host ID to be displayed immediately instead of after exiting PASSTHRU. Again the terminal will be properly refreshed.
  - When temporarily disconnecting from PASSTHRU, the colors will be properly maintained. Previously when reconnecting, the colors would be different. The same occurs when a PMSG is displayed.

In addition, a starting row and starting column can be specified when using the PASSTHRU NOTEPAD facility.

Three new parameters the PASSTHRU EXEC will accept are:

- Parameter 12 can be '\*' or 'YES'  
YES indicates that IMSG and MSG settings should be left as is to allow messages to be displayed while using PASSTHRU, if the user so chooses through their settings. Any other value indicates to set IMSG and MSG off. The default (\*) is to turn them off.
  - Parameter 13 provides a starting row for notepad.  
Specifying an \* results in starting at the top of the screen. Acceptable values are 1 through nn, nn being the maximum number of lines on the screen of the accessing device. If you specify a value for start row, then you must also specify a value for notepf. If the lines parameter was defaulted, then that value will be the number of lines from the start row to the bottom of the screen minus 2.
  - Parameter 14 provides a starting column for notepad.  
Specifying an \* results in starting at the left most column of the screen. Acceptable values are 1 through 132 for 3278 Model 5, or 1 through 80 for other display stations. If you specify a value for start column, then you must also specify a value for notepf. If the columns parameter was defaulted, then that value will be the number of columns from the start column to the end of the screen.
3. the MPVM EXEC will look for the existence of MPVMLINK EXEC, which is an exit point for link and access, or release, of the MPVM common disk. This exit point can be used to access any minidisk or shared file system directory.

When the MPVM EXEC is ready to access the common disk, it will pass control to the MPVMLINK EXEC (if it exists) with GET as a parameter. Possible return codes from MPVMLINK EXEC are:

**Return Code Expected Result**

- 0**        Tells MPVM EXEC disk is linked and accessed
- 4**        Tells MPVM EXEC to do the link and access
- 8**        Tells MPVM EXEC to terminate the session

All other return codes will cause the MPVM EXEC to terminate

If the MPVMLINK EXEC had linked and accessed the common disk, it will be passed control to release and detach the disk with RELEASE as a parameter.

# Reader's Comments

## Program Directory for VM/Pass-Through Facility Version 02 Release 01, Modification Level 01

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Readability and organization of program directory tasks	1	2	3	4	5	N
Necessity of all installation tasks	1	2	3	4	5	N
Accuracy of the definition of the installation tasks	1	2	3	4	5	N
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