IBM

Program Directory for

X.25 NCP Packet Switching Interface (X.25 NPSI)

Version 3 Release 9

Program Number 5688-035

for Use with
VM/ESA

Document Date: October 1998

GI10-6557-00

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

Contents

---

iii

Figures

Notices

References in this publication to IBM products, programs, or services do not imply that IBM intends to make them available in all countries in which IBM operates. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any of IBM's intellectual property rights may be used instead of the IBM product, program, or service. Evaluation and verification of operation in conjunction with other products, except those expressly designated by IBM, are the user's responsibility.

APAR numbers are provided in this document to assist in locating PTFs that may be required. Ongoing problem reporting may result in additional APARs being created. Therefore, the APAR lists in this document may not be complete. To obtain current service recommendations and to identify current product service requirements, always contact the IBM Customer Support Center.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

> International Business Machines Corporation
> IBM Director of Licensing
> 500 Columbus Avenue
> Thornwood, NY 10594
> USA

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

> Site Counsel
> IBM Corporation
> P.O. Box 12195
> 3039 Cornwallis
> Research Triangle Park, NC 277092195
> USA

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement.

This document is not intended for production use and is furnished as is without any warranty of any kind, and all warranties are hereby disclaimed including the warranties of merchantability and fitness for a particular purpose.

Notice to Users of Online Versions of This Book

For online versions of this book, you are authorized to:

- Copy, modify, and print the documentation contained on the media, for use within your enterprise, provided you reproduce the copyright notice, all warning statements, and other required statements on each copy or partial copy.

- Transfer the original unaltered copy of the documentation when you transfer the related IBM product (which may be either machines you own, or programs, if the program's license terms permit a transfer). You must, at the same time, destroy all other copies of the documentation.

You are responsible for payment of any taxes, including personal property taxes, resulting from this authorization.

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Some jurisdictions do not allow the exclusion of implied warranties, so the above exclusion may not apply to you.

Your failure to comply with the terms above terminates this authorization. Upon termination, you must destroy your machine-readable documentation.

Trademarks

The following terms are trademarks of the IBM Corporation in the United States or other countries or both:

BookManager	OS/2
FunctionPac	RETAIN
IBM	SystemPac
IBMLink	VM/ESA
NTuneMON	

Other company, product, and service names may be trademarks or service marks of others.

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 X.25 NPSI V3R9 VM. You should read all of this program directory before installing this program and then keep it for future reference.

This program directory contains the following sections:

- Section 2.0, "Program Materials" on page 3 identifies the basic and optional program materials and documentation for X.25 NPSI V3R9 VM.

- Section 3.0, "Program Support" on page 7 describes the IBM support available for X.25 NPSI V3R9 VM.

- Section 4.0, "Program and Service Level Information" on page 9 provides the program and service level information incorporated into X.25 NPSI V3R9 VM.

- Section 5.0, "Installation Requirements and Considerations" on page 11 identifies the resources and considerations for installing and using X.25 NPSI V3R9 VM.

- Section 6.0, "Installation Instructions" on page 15 provides detailed installation instructions for X.25 NPSI V3R9 VM.

- Section 7.0, "Service Instructions" on page 27 provides detailed servicing instructions for X.25 NPSI V3R9 VM.

- Appendix A, "APARS Incorporated into this Program" on page 37 provides a list of APARs incorporated into X.25 NPSI V3R9 VM.

Before installing X.25 NPSI V3R9 VM, read section 3.1, "Preventive Service Planning" on page 7. This section tells you how to find any updates to the information and procedures in this program directory.

At the end of this program directory you will find a Reader's Comment Form. Please take time to complete this form and return it to the address shown on the form. Your comments and suggestions help improve this program directory and make installation easier.

2.0 Program Materials

An IBM program is identified by a program number and a feature number. The program number for X.25 NCP Packet Switching Interface is 5688-035.

The program announcement material describes the features supported by X.25 NPSI V3R9 VM. Ask your IBM market representative for this information if you have not already received a copy.

The following sections identify:

- Basic and optional program materials available with this program
- Basic, optional, and associated program publications available with this program
- Publications useful during installation

2.1 Basic Machine-Readable Material

This section describes the basic machine-readable material for X.25 NPSI V3R9 VM.

The distribution medium for this program is a 9-track magnetic tape (written at 6250 BPI), a 3480 cartridge, or a 4 mm cartridge. The tape or cartridge contains all programs and data needed for installation. X.25 NPSI V3R9 VM is installed using VMSES/E. See 6.0, "Installation Instructions" on page 15 for more information about how to install the program.

2.1.1 X.25 NPSI V3R9 VM Base Product

Figure 1 describes the program tape or cartridge for the X.25 NPSI V3R9 VM program.

Figure 1. Basic Material: Program Tape

Medium	Feature Number	Physical Volume	Tape Content	External Tape Label
6250 tape	5424	1	X.25 NPSI V3R9	V3R9 VM 568803501
3480 cart.	5425	1	X.25 NPSI V3R9	V3R9 VM 568803501
4 mm cart	7825	1	X.25 NPSI V3R9	V3R9 VM 568803501

Figure 2 describes the file content of the program tape or cartridge for the X.25 NPSI V3R9 VM program.

Figure 2 (Page 1 of 2). Program Tape: File Content

Tape File	Content
1	Tape Header
2	Tape Header
3	Product Header

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

Tape File	Content
4	Product Memo
5	Service Apply Lists
6	PTFPARTs
7	X.25 NPSI V3R9 VM Service
8	X.25 NPSI V3R9 VM Service
9	X.25 NPSI V3R9 VM Base Code
10	X.25 NPSI V3R9 VM Executable Code

2.2 Optional Machine-Readable Material

There are no optional machine-readable materials for X.25 NPSI V3R9 VM.

2.3 Program Publications

The following sections identify the basic and optional publications for X.25 NPSI V3R9 VM.

2.3.1 Basic Program Publications

Figure 3 identifies the basic program publications for X.25 NPSI V3R9 VM. One copy of each of these publications is included when you order the basic materials. For additional copies, contact your IBM representative. A fee is charged for additional copies.

Figure 3. Basic Material: Unlicensed Publications

Publication Title	Form Number
NCP Version 7 and X.25 NPSI Version 3 Planning and Installation	SC30-3470
NCP Version 7 and X.25 NPSI Version 3 Host Programming	SC30-3502
X.25 NCP Packet Switching Interface Version 3 Licensed Programming Specifications	GC30-9605
X.25 NCP Packet Switching Interface Version 3 General Information	GC30-3469

2.3.2 Optional Program Publications

Figure 4 identifies the optional licensed program publications for X.25 NPSI V3R9 VM. The first copy is available at no charge to licensees of the basic material by ordering the 7xxx feature number. Order additional copies using the 8xxx feature number. A fee is charged for additional publications.

Figure 4. Optional Material: Licensed Program Publications

Publication Title	Form Number	Feature Number First Copy	Feature Number Additional Copy
NCP Version 7 and X.25 NPSI Version 3 Diagnosis, Customization, and Tuning	LY30-5610	7040	8007
X.25 NPSI Version 3 Release 9 Data Areas	LY30-5627	7150	8150

2.3.3 Softcopy Publications

All X.25 NPSI V3R9 VM manuals, licensed and unlicensed, except for *NPSI Licensed Program Specifications*, are offered in displayable softcopy form on the media listed in Figure 5.

Figure 5. Softcopy Publications

Title	Form Number	Feature Number First Copy	Feature Number Additional Copy
ACF/NCP, ACF/SSP, EP, NPSI, and NTuneMON Softcopy Collection Kit (CD-ROM)	LK2T-0414#	7160	8160

Note: A pound symbol (#) beside the Form Number indicates that it contains "Restricted Materials of IBM."

2.4 Microfiche Support

Program listings are not provided with X.25 NPSI V3R9 VM.

2.5 Publications Useful During Installation

The publications listed in Figure 6 or Figure 7 on page 6, depending on your VM/ESA release, may be useful during the installation of X.25 NPSI V3R9 VM. To order copies, contact your IBM representative.

Figure 6. Publications Useful During Installation / Service on VM/ESA Version 2.2.0

Publication Title	Form Number
VM/ESA: 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 Version 2.3.0

Publication Title	Form Number
VM/ESA: 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

3.0 Program Support

This section describes the IBM support available for X.25 NPSI V3R9 VM.

3.1 Preventive Service Planning

Before installing X.25 NPSI V3R9 VM, check with your IBM Support Center or use IBMLink (Service Link) to determine if 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

	Retain		
COMPID	**Release**	**Upgrade**	**Subset**
568803501	930	NPSI390	930

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 ID (COMPID), RETAIN Release, and Field Engineering Service Number (FESN) for X.25 NPSI V3R9 VM.

Figure 9. Component IDs

	Retain		
COMPID	**Release**	**Component Name**	**FESN**
568803501	930	X.25 NPSI V3R9	8403501

4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of X.25 NPSI V3R9 VM. The program level refers to the APAR fixes incorporated into this program. The service level refers to the PTFs shipped with this program. Information about the cumulative service tape is also provided.

4.1 Program Level Information

The program level refers to the APAR fixes incorporated into X.25 NPSI V3R9 VM. See Appendix A, "APARS Incorporated into this Program" on page 37 for a complete listing of the APARs incorporated into this program.

4.2 Service Level Information

The service level refers to the PTFs shipped with X.25 NPSI V3R9 VM.

Check the NPSI390 PSP bucket for any additional PTFs that should be installed or any additional install information.

4.3 Cumulative Service Tape

Cumulative service for X.25 NPSI V3R9 VM is available through a monthly corrective service tape, Expanded Service Option (ESO).

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing X.25 NPSI V3R9 VM.

5.1 Program Considerations

The following sections list the programming considerations for installing X.25 NPSI V3R9 VM.

5.1.1 Operating System Requirements

The operating system requirements for X.25 NPSI V3R9 VM are defined by SSP V4R7 VM/ESA, licensed program number 5654-009.

5.1.2 Other Program Product Requirements

5.1.2.1 Programming Requirements:

A platform-dependent BookManager product is required to display softcopy publications on CD-ROM. Limited function DOS, Windows, and OS/2 versions of these products are available on your CD-ROM. For more information or to order full-function releases of these products, or VM or MVS versions, refer to the IBM BookManager home page at **http://booksrv2.raleigh.ibm.com**.

5.1.2.2 Machine Requirements:

X.25 NPSI V3R9 VM operates on the IBM 3745 Communication Controllers, either channel-attached to a host processor or remotely connected through a high-level data link control (HDLC) link through another controller to a host processor.

To support the 3746 Model 900 using X.25 protocol on the communication line adapter with X.25 NPSI V3R8 or later, microcode engineering change level D22512 or higher is required.

5.1.2.3 Minimum Requisites:

A minimum requisite is defined as one of the following:

- *Installation Requisite:* A product that is required at installation time. i.e. this product **will not install** successfully unless this requisite is met.

- *Run Time Requisite:* A product that is **not** required for the successful installation of this product, but **is** needed at run time in order for this product to work.

X.25 NPSI V3R9 VM requires the following program products:

- SSP V4R7 for VM (licensed program number 5654-009)

- NCP V7R7 for VM (licensed program number 5648-063)

5.1.2.4 Functional Requisites:

There are no functional requisites for X.25 NPSI V3R9 VM.

5.1.2.5 Compatibility Requisites:

There are no compatibility requisites for X.25 NPSI V3R9 VM.

5.2 Program Installation and Service Considerations

This section describes items that should be considered before you install or service X.25 NPSI V3R9 VM.

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

- If multiple users install and maintain licensed products on your system, there may be a problem getting the necessary access to MAINT's 51D disk. If you find that there is contention for write access to the 51D disk, you can eliminate it by converting the Software Inventory from minidisk to Shared File System (SFS). Refer to 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 X.25 NPSI V3R9 VM strictly using the MAINT user ID, but will use a new user ID, P688035N. This is the IBM suggested user ID name. You are free to change this to any user ID name you wish; however, a PPF override must be created.

  Note: It may be easier to make the above change during the installation procedure 6.2, "Plan Your Installation For X.25 NPSI V3R9 VM" step 6 on page 17, rather than after you have installed this product.

5.3 DASD Storage and User ID Requirements

Figure 10 on page 13 lists the user IDs and minidisks that are used to install and service X.25 NPSI V3R9 VM.

Important Installation Notes:

- User ID(s) and minidisks or SFS directories will be defined in 6.2, "Plan Your Installation For X.25 NPSI V3R9 VM" on page 16 and are listed here so that you can get an idea of the resources that you will need prior to allocating them.

- P688035N 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 section 6.2, "Plan Your Installation For X.25 NPSI V3R9 VM," step 6 on page 17 .

Note: If you choose to install X.25 NPSI V3R9 VM on a common user ID the default minidisk addresses for X.25 NPSI V3R9 VM may already be defined. If any of the default minidisks required by X.25 NPSI V3R9 VM are already in use you will have to create an override to change the default minidisks for X.25 NPSI V3R9 VM so they are unique.

Figure 10. DASD Storage Requirements for Target Minidisks						
Minidisk owner (user ID)	Default Address	Storage in Cylinders		FB-512 Blocks	SFS 4-K Blocks	Usage
		DASD	CYLS			Default SFS Directory Name
P688035N	2B2	3390 3380 9345	8 10 10	12000	1500	Contains all the base code shipped with X.25 NPSI V3R9 VM **VMSYS:P688035N.NPSI.OBJECT**
P688035N	2C2	3390 3380 9345	4 5 5	6000	750	Contains customization files. This disk may also be used for local modifications. **VMSYS:P688035N.NPSI.LOCAL**
P688035N	2D2	3390 3380 9345	4 5 5	6000	750	Contains serviced files **VMSYS:P688035N.NPSI.DELTA**
P688035N	2A6	3390 3380 9345	4 5 5	6000	750	Contains AUX files and software inventory tables that represent the test service level of X.25 NPSI V3R9 VM **VMSYS:P688035N.NPSI.APPLYALT**
P688035N	2A2	3390 3380 9345	4 5 5	6000	750	Contains AUX files and software inventory tables that represent the service level of X.25 NPSI V3R9 VM that is currently in production. **VMSYS:P688035N.NPSI.APPLYPRD**
P688035N	400	3390 3380 9345	8 10 10	12000	1500	Test BUILD disk. This code will be copied to a production disk. **VMSYS:P688035N.NPSI.TRUN**
P688035N	401	3390 3380 9345	8 10 10	12000	1500	Production BUILD disk. Files from the test BUILD disk are copied here for application use. **VMSYS:P688035N.NPSI.RUN**
P688035N	191	3390 3380 9345	8 10 10	12000	1500	P688035N user ID's 191 minidisk **VMSYS:P688035N.**
Note: Cylinder values defined in this table are based on a 4-K block size. FB-512 block and SFS values are derived from the 3380 cylinder values in this table. That FBA blocks are listed as 1/2-K but should be CMS formatted at 1-K size. 9 000 4-K blocks are needed for SFS install.						

6.0 Installation Instructions

This section describes the installation methods and the step-by-step procedures to install X.25 NPSI V3R9 VM.

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

Each step of the installation instructions must be followed. Do not skip any step unless directed otherwise.

Throughout these instructions, the use of IBM-supplied default minidisk addresses and user IDs is assumed. If you use different user IDs, minidisk addresses, or SFS directories to install X.25 NPSI V3R9 VM, adapt these instructions as needed for your environment.

```
┌── Note! ─────────────────────────────────────────────────────────────────────┐
│                                                                                │
│  The sample console output presented throughout these instructions was produced on a VM/ESA │
│  R2.2.0 system. If you're installing X.25 NPSI V3R9 VM 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 X.25 NPSI V3R9 VM using VMSES/E.

- Planning Your Installation

  Use the VMFINS command to load several VMSES/E files from the product tape and to obtain X.25 NPSI V3R9 VM 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 X.25 NPSI V3R9 VM.

- Install the X.25 NPSI V3R9 VM Product

  Use the VMFINS command to load the X.25 NPSI V3R9 VM 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.

- Place X.25 NPSI V3R9 VM Files into Production

  Once the product files have been installed and the operation of X.25 NPSI V3R9 VM is satisfactory, the product files are copied from the test BUILD disk to the production BUILD disk.

For a complete description of all VMSES/E installation options refer to *VMSES/E Introduction and Reference*.

6.2 Plan Your Installation For X.25 NPSI V3R9 VM

The VMFINS command will be used to plan the installation. This section has 2 main steps that will:

- load the first tape file, containing installation files
- generate a "PLANINFO" file listing
  - all user ID and minidisk/SFS directory requirements
  - required products

To obtain planning information for your environment:

1 Log on as X.25 NPSI V3R9 VM installation planner.

This user ID can be any ID that has read access to MAINT's 5E5 minidisk and write access to the MAINT 51D minidisk.

2 Mount the X.25 NPSI V3R9 VM installation tape and attach it to X.25 NPSI V3R9 VM installation planner at virtual address 181. The VMFINS EXEC requires the tape drive to be at virtual address 181.

3 Establish read access to the VMSES/E code.

link MAINT 5e5 5e5 rr   The 5E5 disk contains the VMSES/E code.
access 5e5 b

4 Establish write access to the Software Inventory disk.

link MAINT 51d 51d mr   The MAINT 51D disk is where the VMSES/E
access 51d d   system-level Software Inventory and other
dependent files reside.

> **Note:**   If another user already has the MAINT 51D minidisk linked in write mode (R/W), you only obtain read access (R/O) to this minidisk. If this occurs, you need to have that user re-link the 51D in read-only mode (RR), and then re-issue the above LINK and ACCESS commands. Do not continue with these procedures until a R/W link is established to the 51D minidisk.

5 Load the X.25 NPSI V3R9 VM product control files to the 51D minidisk.

vmfins install info (nomemo

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

This command will perform the following:

- load Memo-to-Users

- load various product control files, including the Product Parameter File (PPF) and the PRODPART files

- create VMFINS PRODLIST on your A-disk. The VMFINS PRODLIST contains a list of products on the installation tape.

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

6 Obtain resource planning information for X.25 NPSI V3R9 VM.

Note: The product will **not** be loaded by the VMFINS command at this time.

vmfins install ppf 5688035N {NPSI | NPSISFS} (plan nomemo

Use **NPSI** for installing on minidisks or **NPSISFS** for installing in Shared File System directories.

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

You can override any of the following:

- the name of the product parameter file

- the default user IDs

- minidisk/directory definitions

a. If you change the PPF name, a default user ID, or other parameters via a PPF override, you need to use your changed values instead of those indicated (when appropriate), throughout the rest of the installation instructions, as well as the instructions for servicing X.25 NPSI V3R9 VM. For example, you'll need to specify your PPF override file name instead of 5688035N for certain VMSES/E commands.

b. If you are not familiar with creating PPF overrides using VMFINS, you should review the "Using the Make Override Panel" section in *VMSES/E Introduction and Reference* before you continue.

c. For more information about changing the VMSYS file pool name, refer to *VMSES/E Introduction and Reference*.

```
VMFINS2760I VMFINS processing started
VMFREQ2805I Product 5688035N component NPSI passed requisite checking
Do you want to create an override for 5688035N NPSI (prodid 5688035N)?
Enter 0 (No), 1 (Yes) or 2 (Exit)
0
VMFRMT2760I VMFRMT processing started
VMFRMT2760I VMFRMT processing completed successfully
VMFPLA1909I 5688035N PLANINFO created on your A-disk
VMFINS2760I VMFINS processing completed successfully
```

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

vmfview install

6.3 Allocate Resources for Installing X.25 NPSI V3R9 VM

Use the planning information in the 5688035N PLANINFO file, created in the **PLAN** step, to:

- Create the P688035N user directory for minidisk install

  OR

- Create the P688035N user directory for SFS install

6.3.1 Installing X.25 NPSI V3R9 VM on Minidisk

1 Obtain the user directory from the 5688035N PLANINFO file.

Note: The user directory entry is located at the bottom of the PLANINFO file of the resource section; these entries will contain all of the links and privilege classes necessary for the P688035N user ID. Use the directory entry found in PLANINFO as a model for input to your system directory.

2 Add the MDISK statements to the directory entry for P688035N. Use Figure 10 on page 13 to obtain the minidisk requirements.

3 If you are installing X.25 NPSI V3R9 VM on a VM/ESA 370 system, the following directory entry change must be made:

- For the P688035N directory entry:

  – Change the user ID storage from 24M to 16M

  – Comment out or remove the MACHINE XA statement from the directory entry.

4 Add the P688035N directory to the system directory. Change the passwords for P688035N from xxxxx to a valid password, in accordance with your security guidelines.

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

Note

All minidisks for the P688035N user ID must be formatted before installing X.25 NPSI V3R9 VM.

6.3.2 Installing X.25 NPSI V3R9 VM in SFS Directories

1 Obtain the user directory from the 5688035N PLANINFO file.

Note: The user directory entry is located at the bottom of the PLANINFO file of the resource section; these entries will contain all of the links and privilege classes necessary for the P688035N user ID. Use the directory entry found in PLANINFO as a model for input to your system directory.

2 If you are installing X.25 NPSI V3R9 VM on a VM/ESA 370 Feature system, the following directory entry change must be made:

- For the P688035N directory entry:

  – Change the user ID storage from 24M to 16M

      – Comment out or remove the MACHINE XA statement from the
        directory entry.

3 Add the P688035N directory to the system directory. Change the passwords
for P688035N from xxxxx to a valid password, in accordance with your
security guidelines.

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

5 An SFS install will also require the following steps:

  a Determine the number of 4K blocks that are required for SFS directories
    by adding up the 4K blocks required for each SFS directory you plan to
    use.

    If you intend to use all of the default X.25 NPSI V3R9 VM SFS
    directories, the 4K block requirements for each X.25 NPSI V3R9 VM are
    summarized in Figure 10 on page 13.

    This information will be used when enrolling the P688035N to the
    VMSYS filepool.

  b Enroll user P688035N in the VMSYS filepool using the ENROLL USER
    command:

    ENROLL USER P688035N VMSYS: (BLOCKS *blocks*

    where *blocks* is the number of 4k blocks that you calculated in the
    previous step.

    Note: This must be done from a user ID that is an administrator for
    VMSYS: filepool.

  c Determine if there are enough blocks available in the filepool to install
    X.25 NPSI V3R9 VM. 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 X.25 NPSI V3R9 VM you will need to add
    space to the filepool. Refer to *VM/ESA SFS/CRR Planning,*
    Administration, and Operation for information about adding space to a
    filepool.

  d Create the necessary subdirectories listed in the 5688035N PLANINFO
    file using the CREATE DIRECTORY command.

set filepool vmsys: **create directory** *dirid*	*dirid* is the name of the SFS directory you're creating, such as: ``` create directory vmsys:P688035N.NPSI create directory vmsys:P688035N.NPSI.object : ``` If necessary, refer to *VM/ESA CMS Command Reference* for more information about the CREATE DIRECTORY command.

A complete list of default NPSI SFS directories is provided in Figure 10 on page 13.

e If you intend to use an SFS directory as the work space for the P688035N user ID, include the following IPL control statement in the P688035N directory entry:

```
IPL CMS PARM FILEPOOL VMSYS
```

This will cause CMS to automatically access the P688035N's top directory as file mode A.

6.4 Install X.25 NPSI V3R9 VM

The *ppfname* used throughout these installation instructions is **5688035N**, which assumes you are using the PPF supplied by IBM for X.25 NPSI V3R9 VM. If you have your own PPF override file for X.25 NPSI V3R9 VM, you should use your file's *ppfname* instead of **5688035N**. The *ppfname* you use should be used **throughout** the rest of this procedure.

1 Logon to the installation user ID **P688035N**.

2 Create a PROFILE EXEC that contains the ACCESS commands for MAINT 5E5 and 51D minidisks.

xedit profile exec a **===> input /**/** **===> input 'access 5e5 b'** **===> input 'access 51d d'** **===> file**	If either 5E5 or 51D is in a shared file system (SFS) then substitute your SFS directory name in the access command.

3 Execute the profile to access MAINT's minidisks.

profile

4 Establish write access to the Software Inventory disk, if it is not already linked R/W.

Note: If the MAINT 51D minidisk was accessed R/O, you need to have the user who has it linked R/W link it as R/O. You then can issue the following commands to obtain R/W access to it.

link MAINT 51d 51d mr
access 51d d

5 Have the X.25 NPSI V3R9 VM installation tape mounted and attached to P688035N at virtual address 181. The VMFINS EXEC requires the tape drive to be at virtual address 181.

6 Install X.25 NPSI V3R9 VM.

Notes:

If you have already created a PPF override file, you should specify your override file name after the **PPF** keyword for the following VMFINS command.

You may be prompted for additional information during VMFINS INSTALL processing depending upon your installation environment. If you are unsure how to respond to a prompt, refer to "Installing Products with VMFINS" and "Install Scenarios" chapters in *VMSES/E Introduction and Reference* to decide how to proceed.

vmfins install ppf 5688035N {NPSI | NPSISFS} (nomemo nolink

Use **NPSI** for installing on minidisks or **NPSISFS** for installing in Shared File System directories.

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

```
VMFINS2760I VMFINS processing started
VMFREQ2805I Product 5688035N component NPSI passed requisite checking
Do you want to create an override for 5688035N NPSI (prodid 5688035N)?
Enter 0 (No), 1 (Yes) or 2 (Exit)
0
VMFINT2760I VMFINST processing started
VMFLDP2706I 5688035N NPSI (prodid 5688035N) 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   SES2C2
VMFUTL2205I APPLY     F     R/W   2A6   SES2A6
VMFUTL2205I           G     R/W   2A2   SES2A2
VMFUTL2205I DELTA     H     R/W   2D2   SES2D2
VMFUTL2205I BUILD0    I     R/W   400   SES400
VMFUTL2205I BASE1     J     R/W   2B2   SES2B2
VMFUTL2205I --------  A     R/W   191   SES191
VMFUTL2205I --------  B     R/O   5E5   MNT5E5
VMFUTL2205I --------  D     R/W   51D   SES51D
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 9800
VMFREC1851I (1 of 6) VMFRCAXL processing AXLIST
VMFRCX2159I Loading 0 part(s) to DELTA 2D2 (H)
VMFREC1851I (2 of 6) VMFRCPTF processing PARTLST
VMFRCP2159I Loading 0 part(s) to DELTA 2D2 (H)
VMFREC1851I (3 of 6) VMFRCCOM processing DELTA
VMFRCC2159I Loading 0 part(s) to DELTA 2D2 (H)
VMFREC1851I (4 of 6) VMFRCALL processing APPLY
VMFRCA2159I Loading part(s) to APPLY 2A6 (F)
VMFRCA2159I Loaded 1 part(s) to APPLY 2A6 (F)
VMFREC1851I (5 of 6) VMFRCALL processing BASE
VMFRCA2159I Loading part(s) to BASE1 2B2 (J)
VMFRCA2159I Loaded 161 part(s) to BASE1 2B2 (J)
VMFREC1851I (6 of 6) VMFRCALL processing BUILD
VMFRCA2159I Loading part(s) to BUILD0 400 (I)
VMFRCA2159I Loaded 3 part(s) to BUILD0 400 (I)
VMFREC2760I VMFREC processing completed successfully
VMFINT2603I Product installed
VMFINS2760I VMFINS processing completed successfully
```

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

6.4.1 Update Build Status Table for X.25 NPSI V3R9 VM

1 Update the VM SYSBLDS software inventory file for X.25 NPSI V3R9 VM.

vmfins build ppf 5688035N {NPSI | NPSISFS} (serviced nolink

Use **NPSI** for installing on minidisks or **NPSISFS** for installing in Shared File System directories.

The SERVICED option will build any parts that were not built on the installation tape (if any) and update the Software Inventory build status table showing that the product 5688035N has been built.

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

vmfview install

6.5 Place X.25 NPSI V3R9 VM Into Production

This section describes the procedure to place X.25 NPSI V3R9 VM into production.

6.5.1 Copy X.25 NPSI V3R9 VM Files Into Production

1 Logon to P688035N user ID. This user ID owns the disk that will contain the "production" level of the X.25 NPSI V3R9 VM code.

a If installing using minidisks

access 400 e
access 401 f
vmfcopy * * e = = f2 (prodid 5688035N%NPSI olddate replace

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

b If installing using Shared File System

access P688035N.NPSI.trun e
access P688035N.NPSI.run f
vmfcopy * * e = = f2 (prodid 5688035N%NPSI olddate replace

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

X.25 NPSI V3R9 VM is now installed and built on your system.

7.0 Service Instructions

This section contains the procedure to install CORrective service to X.25 NPSI V3R9 VM. VMSES/E is used to install service for X.25 NPSI V3R9 VM.

To become more familiar with service using VMSES/E, you should read the introductory chapters in *VMSES/E Introduction and Reference*. This manual also contains the command syntax for the VMSES/E commands listed in the procedure.

Note: Each step of the servicing instructions must be followed. Do not skip any step unless otherwise directed. All instructions showing accessing of disks assume the use of default minidisk addresses. If different minidisk addresses are used, or if using a shared file system, change the instructions appropriately.

7.1 VMSES/E Service Process Overview

The following is a brief description of the main steps in servicing X.25 NPSI V3R9 VM using VMSES/E.

* Setup Environment

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

* Merge Service

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

* Receive Service

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

* Apply Service

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

* Reapply Local Service (if applicable)

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

* Build New Levels

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

* Place the New Service into Production

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

7.2 Servicing X.25 NPSI V3R9 VM

This section describes the procedure to service X.25 NPSI V3R9 VM.

7.2.1 Prepare to Receive Service

The *ppfname* used throughout these servicing instructions is **5688035N**, which assumes you are using the PPF supplied by IBM for X.25 NPSI V3R9 VM. If you have your own PPF override file for X.25 NPSI V3R9 VM, you should use your file's *ppfname* instead of **5688035N**. The *ppfname* you use should be used **throughout** the rest of this procedure, unless otherwise stated differently.

1 Log onto X.25 NPSI V3R9 VM service user ID **P688035N**

2 Establish access to the software inventory disk.

   Note: If the MAINT 51D minidisk was accessed R/O, you will need to have the user that has it accessed R/W link it R/O. You then can issue the following commands to obtain R/W access to it.

link MAINT 51d 51d mr **access 51d d**	The 51D minidisk is where the VMSES/E Software Inventory files and other product dependent files reside.

3 Have the X.25 NPSI V3R9 VM CORrective service tape mounted and attached to **P688035N**.

4 Establish the correct minidisk access order.

vmfsetup 5688035N {NPSI | NPSISFS}	5688035N is the PPF that was shipped with the product. If you have your own PPF override you should substitute your PPF name for 5688035N. Use **NPSI** for installing on minidisks or **NPSISFS** for installing in Shared File System directories.

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

> **Electronic Service**
>
> If you are receiving service from Service Link (electronic service), refer to 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 X.25 NPSI V3R9 VM in the instructions shown in that Appendix. Then return back to this program directory and continue with step 7 on page 29 below.

vmfrec info

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

6 Check the receive message log ($VMFREC $MSGLOG) for warning and error messages.

vmfview receive

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

7 Clear the alternate APPLY disk to ensure that you have a clean disk for new service.

vmfmrdsk 5688035N {NPSI | NPSISFS} apply

> Use **NPSI** for installing on minidisks or **NPSISFS** for installing in Shared File System directories.
>
> This command clears the alternate APPLY disk.

8 Review the merge message log ($VMFMRD $MSGLOG). If necessary, correct any problems before proceeding. For information about handling specific error messages, refer to *VM/ESA System Messages and Codes*, or use on-line HELP.

vmfview mrd

7.2.2 Receive the Service

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

Electronic Service

If you are receiving service from Service Link (electronic service), refer to Appendix A, "Receiving Service for VMSES Envelopes", section "Receive the Service", in the *VM/ESA Service Guide*. Remember to substitute the *ppfname* and *compname* used for servicing X.25 NPSI V3R9 VM in the instructions shown in that Appendix. Then return back to this program directory and continue with section 7.2.3, "Apply the Service."

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

1 Receive the service.

vmfrec ppf 5688035N {NPSI | NPSISFS}

> Use **NPSI** for installing on minidisks or **NPSISFS** for installing in Shared File System directories.
>
> This command receives service from your service tape. All new service is loaded to the DELTA disk.

2 Review the receive message log ($VMFREC $MSGLOG). If necessary, correct any problems before proceeding. For information about handling specific error messages, refer to *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 5688035N {NPSI | NPSISFS}

Use **NPSI** for installing on minidisks or **NPSISFS** for installing in Shared File System directories.

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

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

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

vmfview apply

Note

If you get message VMFAPP2120W, re-apply any local modifications before building the new X.25 NPSI V3R9 VM. Refer to chapter 7 in *VM/ESA Service Guide* (SC24-5527). Follow the steps that are applicable to your local modification.

The following substitutions need to be made:

- **esalcl** should be **5688035N**
- **esa** should be **5688035N**
- *compname* should be **NPSI** or **NPSISFS** (minidisk or SFS)
- *appid* should be **5688035N**
- *fm-local* should be the fm of 2C2
- *fm-applyalt* should be the fm of 2A6

If you have changed any of the installation parameters through a PPF override, you need to substitute your changed values where applicable.

Keep in mind when you get to the "Rebuilding Objects" step in *VM/ESA Service Guide*, you should return to this program directory at 7.2.4, "Update the Build Status Table."

7.2.4 Update the Build Status Table

1 Update the Build Status Table with serviced parts.

vmfbld ppf 5688035N {NPSI | NPSISFS} (status

Use **NPSI** for installing on minidisks or **NPSISFS** for installing in Shared File System directories.

This command updates the Build Status Table.

```
┌─ Note ─────────────────────────────────────────────────────────────────────┐
```

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

```
VMFBLD2185R The following source product parameter files have been
            serviced:
VMFBLD2185R 5688035N $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 5688035N $PPF
            on 191 (A) from level $PFnnnnn
```

vmfppf 5688035N {NPSI | NPSISFS}   **Note:** If you created your own PPF override
                                                   then use your PPF name instead of
                                                   5688035N.

                                                   Use **NPSI** for installing on minidisks or
                                                   NPSISFS for installing in Shared File System
                                                   directories.

copyfile 5688035N $PPF a = = d (olddate replace
erase 5688035N $PPF a

                                                   Note: **Do not** use your own PPF name in
                                                   place of 5688035N for the COPYFILE and
                                                   ERASE commands.

vmfbld ppf 5688035N {NPSI | NPSISFS} (status

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

                                                   Use **NPSI** for installing on minidisks or
                                                   NPSISFS for installing in Shared File System
                                                   directories. When you receive the prompt that
                                                   was previously displayed, enter a 1 to
                                                   continue.

2 Use VMFVIEW to review the build status messages and see what objects need to be built.

vmfview build

7.2.5 Build Serviced Objects

1 Rebuild X.25 NPSI V3R9 VM serviced parts.

vmfbld ppf 5688035N {NPSI | NPSISFS} (serviced

> Use **NPSI** for installing on minidisks or **NPSISFS** for installing in Shared File System directories.
>
> **Note:** If your software inventory disk (51D) is not owned by the MAINT user ID then make sure the VMSESE PROFILE reflects the correct owning user ID.

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

vmfview build

7.3 Place the New X.25 NPSI V3R9 VM Service Into Production

This section describes the procedure to place the new X.25 NPSI V3R9 VM Service into production.

7.3.1 Copy the New X.25 NPSI V3R9 VM Serviced Files Into Production

1 Logon to P688035N user ID. This user ID owns the disk that will contain the "production" level of the X.25 NPSI V3R9 VM code.

a If installing using minidisks

access 400 e
access 401 f
vmfcopy * * e = = f2 (prodid 5688035N%NPSI olddate replace

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

b If installing using Shared File System

access P688035N.NPSI.trun e
access P688035N.NPSI.run f
vmfcopy * * e = = f2 (prodid 5688035N%NPSI olddate replace

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

You have finished servicing X.25 NPSI V3R9 VM.

Appendix A. APARS Incorporated into this Program

The following NPSI V3R8 APARs are incorporated into this program:

IR28072	IR30764	IR32885	IR34289	IR35802
IR28127	IR30911	IR32993	IR34323	IR36086
IR29070	IR31181	IR33012	IR34335	IR36340
IR29136	IR31385	IR33070	IR34345	IR36426
IR29295	IR31399	IR33348	IR34390	IR36462
IR29410	IR31646	IR33353	IR34506	IR36635
IR29598	IR31688	IR33526	IR34490	IR36636
IR29674	IR31944	IR33628	IR34510	IR37335
IR30005	IR32026	IR33800	IR34704	IR37504
IR30008	IR32174	IR33896	IR34797	IR37463
IR30009	IR32229	IR33994	IR34834	IR37745
IR30066	IR32244	IR34016	IR35030	IR37797
IR30175	IR32271	IR34047	IR35362	IR37825
IR30215	IR32406	IR34193	IR35515	IR37827
IR30403	IR32441	IR34175	IR35587	IR37864
IR30746	IR32642	IR34209	IR35598	

Reader's Comments

Program Directory for X.25 NCP Packet Switching Interface Version 3 Release 9 for VM

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

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

<table>
<tr><td colspan="6">RATING SCALE</td></tr>
<tr><td>very
satisfied</td><td></td><td>◄--------------------------------►</td><td></td><td>very
dissatisfied</td><td>not
applicable</td></tr>
<tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>N</td></tr>
</table>

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

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

    □ Independent
    □ Package

      What type of package was ordered?

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

39

- Is this the first time your organization has installed this product?

  □ Yes
  □ No

- Were the people who did the installation experienced with the installation of VM products using VMSES/E?

  □ Yes

    How many years of experience do they have? _____

  □ No

- How long did it take to install this product? _____

- If you have any comments to make about your ratings above, or any other aspect of the product installation, please list them below:

  _____

  _____

  _____

  _____

  _____

  _____

  _____

  _____

Please provide the following contact information:

_____

Name and Job Title

_____

Organization

_____

_____

Address

_____

Telephone

Thank you for your participation.

Please send the completed form to the following address, or give to your IBM representative who will forward it to the X.25 NCP Packet Switching Interface Development group:

Design & Information Development
Dept. CGF/Bldg. 656
International Business Machines Corporation
PO Box 12195
RESEARCH TRIANGLE PARK NC 27709-9990

IBM®

Program Number: 5688-035   5424
                            5425
                            7825

Printed in U.S.A.