



**Program Directory for  
X.25 NCP Packet Switching Interface (X.25 NPSI)**

Version 3 Release 9

Program Number 5688-035

FMID HXX3902

for Use with  
MVS/ESA  
OS/390

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GI10-6556-00

**Note!**

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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.

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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 about the material and procedures needed for the installation of X.25 NPSI V3R9 MVS. You should read all of this program directory before installing the program and then keep it for future reference.

The program directory contains the following sections:

- 2.0, "Program Materials" on page 3 identifies the basic and optional program materials and documentation for this program.
- 3.0, "Program Support" on page 7 describes the IBM support available for this program.
- 4.0, "Program and Service Level Information" on page 9 provides the program and service level information incorporated into this product.
- 5.0, "Installation Requirements and Considerations" on page 11 identifies the resources and considerations for installing and using X.25 NPSI V3R9 MVS.
- 6.0, "Install Instructions" on page 15 provides detailed installation instructions for X.25 NPSI V3R9 MVS.
- Appendix A, "Install Logic" on page 25 provides the installation logic for this program.
- Appendix B, "APARs Incorporated into this Program" on page 27 provides a list of APARs incorporated into this program.

Beginning with NSPI V3R7 for MVS, usage tiers are included on the base tape for this program. It is no longer necessary to install separate tapes for usage tiers.

Before installing X.25 NPSI V3R9 MVS, read 3.2, "Preventive Service Planning" on page 7. This section tells you how to find any updates to the information and procedures in this program directory.

IBM recommends that you use an OS/390 ServerPac to install this level of NPSI. If you use a ServerPac, you get the service integrated in the product. ServerPac is available at no additional charge when you have an OS/390 license.

Do not use this program directory if you are installing X.25 NPSI V3R9 MVS with an MVS Custom-Built Installation Process Offering (CBIPO), SystemPac or ServerPAC. When using these offerings, use the jobs and documentation supplied with the offering. This documentation may point you to specific sections of the program directory as required.

If you are installing X.25 NPSI V3R9 MVS using the MVS Custom-Built Product Delivery Offering (CBPDO) (5751-CS3), use the softcopy program directory provided on the CBPDO tape. Your CBPDO contains a softcopy preventive service planning (PSP) upgrade for this product. All service and HOLDDATA for X.25 NPSI V3R9 MVS are included on the CBPDO tape.

To facilitate the installation of X.25 NPSI V3R9 MVS, all JCL statements that appear in this program directory are also in machine-readable format on the product tape. The JCL is contained in Relative File 2, DLIB=ABALSAMP, MEMBER=BALINJCL. The JCL to unload the installation JCL is in Figure 16 on page 16.

All occurrences of lowercase variables must be changed to the appropriate uppercase values in order for the JCL to execute properly in the JCL examples shown 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.

---

## **1.1 X.25 NPSI V3R9 MVS FMIDs**

X.25 NPSI V3R9 MVS consists of FMID HXX3902.

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## 2.0 Program Materials

An IBM program is identified by a program number and a feature number. The program number for X.25 NPSI V3R9 MVS is 5688-035. Feature numbers associated with this release are provided in the following section.

Basic Machine-Readable Materials are materials that are supplied under the base license and feature code, and are required for the use of the product. Optional Machine-Readable Materials are orderable under separate feature codes, and are not required for the product to function.

The program announcement material describes the features supported by X.25 NPSI V3R9 MVS. Ask your IBM 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
- Program publications
- Program source materials
- Publications associated with this program
- Publications useful during installation

---

### 2.1 Basic Machine-Readable Materials

This section describes the basic machine-readable materials for X.25 NPSI V3R9 MVS.

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 the programs and data needed for installation. It is installed using SMP/E, and is in SMP/E RELFILE format. See section 6.0, "Install Instructions" on page 15 for more information about how to install this program.

Figure 1 describes the program tape or cartridge.

**Note:** If you are installing X.25 NPSI V3R9 MVS using the MVS Custom-Built Product Delivery Offering (CBPDO) (5751-CS3), some of the information in these figures may not be valid. Consult the CBPDO documentation for actual values.

*Figure 1. Basic Material: Program Tapes*

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Medium	Feature Number	Physical Volume	External Label Identification	VOLSER
6250 tape	5421	1	MVSOBJ HXX3902	XX3902
3480 cart.	5422	1	MVSOBJ HXX3902	XX3902
4 mm cart.	7897	1	MVSOBJ HXX3902	XX3902

Figure 2 describes the file content of the program tape or cartridge.

Figure 2. Basic Program Tapes: File Content

VOLSER	File	Name	Dist. Library	RECFM	LRECL	BLK SIZE
XX3902	1	SMPMCS		FB	80	6400
XX3902	2	IBM.HXX3902.F1	AMACLIB (JCLIN)	FB	80	8800
XX3902	3	IBM.HXX3902.F2	ABALMAC1 ABALSAMP	FB	80	8800
XX3902	4	IBM.HXX3902.F3	ABALMOD1	U	0	6144

### 2.1.1 Optional Machine-Readable Materials

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

## 2.2 Program Publications

The following sections identify the basic, optional, and associated publications for X.25 NPSI V3R9 MVS.

### 2.2.1 Basic Program Publications

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

Figure 3. Basic Material: Program Publications

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

### 2.2.2 Optional Licensed Program Publications

Figure 4 identifies the optional licensed program publications for X.25 NPSI V3R9 MVS. 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 each publication.

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 NCP Packet Switching Interface Version 3 Release 9 Data Areas	LY30-5627	7150	8150

## 2.2.3 Softcopy Publications

All X.25 NPSI V3R9 MVS 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 it contains "Restricted Materials of IBM."

## 2.2.4 Publications Associated with X.25 NPSI V3R9 MVS

Figure 6 lists the publications that may be helpful when you use this program. To order copies, contact your IBM representative. A fee is charged for each publication.

Figure 6. Publications Associated with X.25 NPSI V3R9 MVS

Publication Title	Form Number
Planning for NetView, NCP, and VTAM	SC31-8063
Planning for Integrated Networks	SC31-8062

## 2.3 Program Source Materials

No program source materials or viewable program listings are provided for X.25 NPSI V3R9 MVS.

## 2.4 Publications Useful During Installation

The publications listed in Figure 7 may be useful during the installation of this program. To order copies, contact your IBM representative. A fee is charged for each publication.

Figure 7. Publications Useful During Installation

<b>Publication Title</b>	<b>Form Number</b>
MVS Software Manufacturing Offerings General Information	GC23-0351
MVS/ESA JCL Reference	GC28-1829
MVS/ESA JCL User's Guide	GC28-1830
MVS/ESA System Codes	GC28-1815
MVS/ESA System Messages Volume 1	GC28-1812
MVS/ESA System Messages Volume 2	GC28-1813
OS/390 MVS JCL Reference	GC28-1757
OS/390 MVS JCL User's Guide	GC28-1758
OS/390 MVS System Codes	GC28-1780
OS/390 MVS System Messages, Vol 1 (ABA-ASA)	GC28-1784
OS/390 MVS System Messages, Vol 2 (ASB-EWX)	GC28-1785
OS/390 MVS System Messages, Vol 3 (GDE-IEB)	GC28-1786
OS/390 MVS System Messages, Vol 4 (IEC-IFD)	GC28-1787
OS/390 MVS System Messages, Vol 5 (IGD-IZP)	GC28-1788
OS/390 SMP/E Commands	SC28-1805
OS/390 SMP/E Messages and Codes	SC28-1738
OS/390 SMP/E Reference	SC28-1806
OS/390 SMP/E User's Guide	SC28-1740
SMP/E: Messages and Codes	SC28-1108
SMP/E: Reference Guide	SC28-1107
SMP/E: User's Guide	SC28-1302

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## 3.0 Program Support

This section describes the IBM support available for this program.

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### 3.1 Program Services

Contact your IBM representative for specific information about available program services.

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### 3.2 Preventive Service Planning

Before installing X.25 NPSI V3R9 MVS, you should review the current Preventive Service Planning (PSP) information. If you obtained X.25 NPSI V3R9 MVS as part of a CBPDO, there is HOLDDATA and PSP information included on the CBPDO tape.

If you obtained X.25 NPSI V3R9 MVS on a product tape, or if the CBPDO is more than two weeks old when you install it, you should contact the IBM Support Center or use S/390 SoftwareXcel to obtain the current "PSP Bucket".

PSP Buckets are identified by UPGRADEs, which specify product levels, and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for X.25 NPSI V3R9 MVS are:

*Figure 8. PSP Upgrade and Subset ID*

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UPGRADE	SUBSET	Description
NPSI390	HXX3902	X.25 NPSI V3R9 MVS

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### 3.3 Statement of Support Procedures

For help with problem determination and problem source identification, refer to *NCP Version 7 and X.25 NPSI Version 3 Diagnosis, Customization, and Tuning*. Report any difficulties you have using this program to your IBM Support Center.

Figure 9 identifies the component ID (COMPID), and Retain Release for X.25 NPSI V3R9 MVS.

*Figure 9. Component IDs*

---

FMID	COMPID	Component Name	REL
HXX3902	568803501	X.25 NPSI V3R9	902

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## **4.0 Program and Service Level Information**

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

---

### **4.1 Program Level Information**

See Appendix B, "APARs Incorporated into this Program" on page 27 for a list of APARs incorporated into this program.

---

### **4.2 Service Level Information**

No PTFs against this release of X.25 NPSI V3R9 MVS have been incorporated into the product tape.

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### **4.3 Cumulative Service Tape**

A cumulative service tape, containing PTFs not incorporated into this release, might be included with this program. Installation instructions for cumulative service tapes can be found in the SMP/E publications. If this tape is included, it will be used in Section 6.2, "Post-Installation Information" on page 22.

If you received this product as part of a CBPDO or a ProductPac, PTFs not incorporated into this release are provided on the tape, and a separate cumulative service tape will not be provided.



---

## 5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing X.25 NPSI V3R9 MVS. The following terminology is used:

- *Driving system*: the system used to install the program.
- *Target system*: the system on which the program is installed.

In many cases, the same system can be used as both a driving system and a target system.

---

### 5.1 Driving System Requirements

This section describes the environment of the driving system required to install X.25 NPSI V3R9 MVS.

#### 5.1.1 Operating System Requirements

The operating system requirements are defined by SSP V4R7 licensed program number 5655-041.

#### 5.1.2 Machine Requirements

The driving system can run in any hardware environment that supports the required software.

#### 5.1.3 Programming Requirements

*Figure 10. Driving System Software Requirements*

---

<b>Program Number</b>	<b>Product Name and Minimum VRM/Service Level</b>
5668-949	System Modification Program/Extended (SMP/E) Release 8.1 or higher

---

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 MVS versions, refer to the IBM BookManager home page at <http://booksrv2.raleigh.ibm.com>.

---

### 5.2 Target System Requirements

This section describes the environment of the target system required to install and use X.25 NPSI V3R9 MVS.

## 5.2.1 Machine Requirements

This program operates on the IBM 3745 Communication Controller, 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 adapters with X.25 NPSI V3R8 or later, microcode engineering change level D22512 or higher is required.

## 5.2.2 Programming Requisites

### 5.2.2.1 Minimum Requisites:

A minimum requisite is 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. This includes products that are specified as REQs, PREs, or CALLLIBs.
- *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.

NCP V7R7 for MVS is required to operate this program.

SSP V4R7 for MVS is required to generate this program.

Figure 11. Minimum Requisites

Program Number	Product Name and Minimum VRM/Service Level	Install Req?
5655-041	System Support Program Version 4 Release 7	No
5648-063	Network Control Program Version 7 Release 7	Yes

### 5.2.2.2 Functional Requisites:

A functional requisite is defined as a product that is *not* required for the successful installation of this product or for the base function of the product, but one or more of the products *may be* needed at run time for a specific function of this product to work depending upon the specific customer installation.

There are no functional requisites required.

### 5.2.2.3 Compatibility Requisites:

The following sections contain system considerations for NPM.

#### 5.2.2.4 NPM:

The NPM APARs listed in Figure 12 on page 13 are required for compatibility with X.25 NPSI on 3746 Model 900 support.

Figure 12. NPM APARs Required for Compatibility with X.25 NPSI

Product Name	APAR
NPM V2R1 MVS	OW10583
NPM V2R2 MVS	OW10583

#### 5.2.2.5 Toleration/Coexistence Requisites:

There are no toleration/coexistence requisites required.

#### 5.2.2.6 Incompatibility (Negative) Requisites:

There are no incompatible products associated with this product.

---

### 5.3 DASD Storage Requirements

Space requirements for SMP/E libraries (data sets) must take into consideration other programs that may use these libraries. The following SMP/E library space requirements are designed to accommodate installation and initial maintenance of X.25 NPSI V3R9 MVS.

**Note:** : Abbreviations used for the data set type are:

- U** Unique data set used by only the FMIDs listed. In order to determine the correct storage needed for this data set, this table provides all required information; no other tables (or program directories) need to be referenced for the data set size.
- S** Shared data set used by more than the FMIDs listed. In order to determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.

If you currently have a previous release of this product installed in these libraries, the installation of this release will delete the old one and reclaim the space used by the old release and any service that had been installed. You can determine whether or not these libraries have enough space by deleting the old release with a dummy function, compressing the libraries, and comparing the space requirements with the free space in the libraries.

For more information on the setup of the SMP/E environment, refer to the NCP V7R7 MVS Program Directory.

For more information on the names and sizes of the required data sets, please refer to 6.1.4, "Allocate SMP/E Target and Distribution Libraries" on page 16.

The following figures list the target and distribution libraries (data sets) and their attributes required to install X.25 NPSI V3R9 MVS. The storage requirements of X.25 NPSI V3R9 MVS must be added to the storage required by other programs having data in the same data set (library).

Figure 13. Storage Requirements for X.25 NPSI V3R9 MVS Target Libraries

Library DDNAME	T Y P E	D S R G	R E F M	L R E C L	No. of Blks	BLK SIZE	No. of 3380/ 9345 Trks	No. of 3390 Trks	No. of DIR Blks
SBALMAC1	S	PO	FB	80	161	8800	33	27	5
SBALMOD1	S	PO	U	0	249	6144	36	28	16

Figure 14. Storage Requirements for X.25 NPSI V3R9 MVS Distribution Libraries

Library DDNAME	T Y P E	D S R G	R E F M	L R E C L	No. of Blks	BLK SIZE	No. of 3380/ 9345 Trks	No. of 3390 Trks	No. of DIR Blks
ABALMAC1	S	PO	FB	80	161	8800	33	27	5
ABALMOD1	S	PO	U	0	249	6144	36	28	16
ABALSAMP	S	PO	FB	80	35	8800	7	6	1

## 5.4 FMIDs Deleted

Please see the SMPMCS file in Appendix A for the FMIDs deleted by X.25 NPSI V3R9 MVS.

## 5.5 Special Considerations

X.25 NPSI V3R9 MVS has no special considerations for the target system.

---

## 6.0 Install Instructions

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

### 6.1.1 SMP/E Considerations for Installing X.25 NPSI V3R9 MVS

This release of X.25 NPSI V3R9 MVS is installed using the SMP/E RECEIVE, APPLY, and ACCEPT commands. The SMP/E dialogs may be used to accomplish the SMP/E installation steps.

### 6.1.2 SMP/E Environment

All SMP/E installation jobs provided assume that all necessary DD statements for the execution of SMP/E are defined using DDDEFs.

Sample jobs are provided to assist you in installing X.25 NPSI V3R9 MVS. The JCL samples in this section use lowercase character strings to represent items that must be changed to uppercase names for your specific environment. Figure 15 provides a description of each character string.

*Figure 15. Character String Descriptions*

Character string	Description
xxxxxx	Volume ID of the library pack
ncpzzzzz	High-level qualifier for data sets
ncptgt	SMP/E target zone used for NCP
ncpdlib	SMP/E distribution zone used for NCP
tape	Tape unit type

**Note:** The SMP/E data sets used for the NCP installation should be used for this NPSI installation.

### 6.1.3 Unload the Sample JCL from the Product Tape

Sample installation jobs are provided on the distribution tape to help you install X.25 NPSI V3R9 MVS. The following sample JCL will copy the X.25 NPSI V3R9 MVS jobs from the tape. See Figure 16 on page 16 for the JCL to unload the sample JCL from the tape.

```

//BALINJCL JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
//*
/** NOTE 1) UPDATE DATA SET NAME, UNIT FIELDS,
/**      AND VOL=SER AS REQUIRED
/** NOTE 2) NORMAL JOB CONDITION CODE IS ZERO(0)
/**
//COPY      EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=A
//TAPEIN    DD  DSN=IBM.HXX3902.F2,VOL=SER=XX3902,
//           UNIT=tape,DISP=OLD,LABEL=(3,SL)
//DISKOUT   DD  DSN=IBM.HXX3902.INSTALL.JCL,VOL=SER=xxxxxx,
//           SPACE=(CYL,(1,1,5)),DISP=(NEW,CATLG),
//           UNIT=SYSDA
//SYSUT3    DD  UNIT=SYSDA,SPACE=(80,(15,1))
//SYSIN     DD  *
//           COPY I=TAPEIN,0=DISKOUT
//           SELECT MEMBER=BALINJCL
//           SELECT MEMBER=BALFTPAP
/**

```

Figure 16. JCL to Unload the Installation JCL

### Expected Return Codes and Messages:

BALINJCL job ends with return code equal zero (RC=0). The JCL is contained in Relative File 2, DLIB=ABALSAMP, MEMBER=BALINJCL.

You can also access the sample installation jobs after performing an SMP/E RECEIVE for FMID HXX3902, and then copying the jobs from dataset **hlq.IBM.HXX3902.F2** to a work dataset for editing and submission.

There is a second member in the ABALSAMP library named FTPIAPPL. This member is a sample application for the GATE/FTPI function and is provided without warranty as an example of how to code a GATE/FTPI CTCP.

## 6.1.4 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job LIBRARY to allocate the SMP/E target and distribution libraries for X.25 NPSI V3R9 MVS. Consult the instructions in the sample job for more information. See Figure 17 on page 17 for the JCL to allocate target and distribution libraries.



```

//LIBRARY JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
//*
//ALLOCATE EXEC PGM=IEFBR14
//SYSPRINT DD SYSOUT=A
//SBALMAC1 DD VOL=SER=xxxxxx,DISP=(NEW,CATLG),UNIT=SYSDA,
//          DSN=ncpzxxxx.SBALMAC1,SPACE=(8800,(207,9,9)),
//          DCB=(LRECL=80,RECFM=FB,BLKSIZE=8800)
//SBALMOD1 DD VOL=SER=xxxxxx,DISP=(NEW,CATLG),UNIT=SYSDA,
//          DSN=ncpzxxxx.SBALMOD1,SPACE=(6144,(265,9,22)),
//          DCB=(LRECL=0,RECFM=U,BLKSIZE=6144)
//ABALMAC1 DD VOL=SER=xxxxxx,DISP=(NEW,CATLG),UNIT=SYSDA,
//          DSN=ncpzxxxx.ABALMAC1,SPACE=(8800,(207,9,9)),
//          DCB=(LRECL=80,RECFM=FB,BLKSIZE=8800)
//ABALMOD1 DD VOL=SER=xxxxxx,DISP=(NEW,CATLG),UNIT=SYSDA,
//          DSN=ncpzxxxx.ABALMOD1,SPACE=(6144,(265,9,22)),
//          DCB=(LRECL=0,RECFM=U,BLKSIZE=6144)
//ABALSAMP DD VOL=SER=xxxxxx,DISP=(NEW,CATLG),UNIT=SYSDA,
//          DSN=ncpzxxxx.ABALSAMP,SPACE=(8800,(55,4,1)),
//          DCB=(LRECL=80,RECFM=FB,BLKSIZE=8800)
//*

```

Figure 17. JCL to Allocate Target and Distribution libraries

### Expected Return Codes and Messages:

LIBRARY job ends with return code equal zero (RC=0).

## 6.1.5 Create DDDEF Entries

Edit and submit sample job DDDEF to create DDDEF entries for the X.25 NPSI-unique target and distribution libraries for X.25 NPSI V3R9 MVS. See Figure 18 on page 18 for the JCL to create DDDEF entries.

```

//DDDEF JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
//**
//*****
//* ADD THE NEW 'DISTRIBUTION' LIBRARY DD NAMES TO */
//* THE DISTRIBUTION ZONE. */
//*****
//**
//DZONE EXEC PGM=GIMSMP,PARM='DATE=U',REGION=4096K,
// TIME=1440
//SMPOUT DD SYSOUT=A
//SYSPRINT DD SYSOUT=A
//SMPLOG DD DSN=ncpzxxx.SMPLOG,DISP=SHR
//SMPPTS DD DSN=ncpzxxx.SMPPTS,DISP=SHR
//SMPCSI DD DSN=ncpzxxx.GLOBAL.CSI,DISP=SHR
//SMPCNTL DD *
SET BDY(ncpdlib) .
UCLIN .
ADD DDDEF(ABALMAC1) DATASET(ncpzxxx.ABALMAC1)
VOLUME(xxxxxx) UNIT(SYSDA) SHR .
ADD DDDEF(ABALMOD1) DATASET(ncpzxxx.ABALMOD1)
VOLUME(xxxxxx) UNIT(SYSDA) SHR .
ADD DDDEF(ABALSAMP) DATASET(ncpzxxx.ABALSAMP)
VOLUME(xxxxxx) UNIT(SYSDA) SHR .
ENDUCL .
//**
//*****
//* ADD THE NEW 'DISTRIBUTION' LIBRARY AND 'TARGET' */
//* LIBRARY DD NAMES TO THE TARGET ZONE. */
//*****
//TZONE EXEC PGM=GIMSMP,PARM='DATE=U',REGION=4096K,
// TIME=1440
//SMPOUT DD SYSOUT=A
//SYSPRINT DD SYSOUT=A
//SMPLOG DD DSN=ncpzxxx.SMPLOG,DISP=SHR
//SMPPTS DD DSN=ncpzxxx.SMPPTS,DISP=SHR
//SMPCSI DD DSN=ncpzxxx.GLOBAL.CSI,DISP=SHR
//SMPCNTL DD *
SET BDY(ncptgt) .
UCLIN .
ADD DDDEF(SBALMAC1) DATASET(ncpzxxx.SBALMAC1)
VOLUME(xxxxxx) UNIT(SYSDA) SHR .
ADD DDDEF(SBALMOD1) DATASET(ncpzxxx.SBALMOD1)
VOLUME(xxxxxx) UNIT(SYSDA) SHR .
ADD DDDEF(ABALMAC1) DATASET(ncpzxxx.ABALMAC1)
VOLUME(xxxxxx) UNIT(SYSDA) SHR .
ADD DDDEF(ABALMOD1) DATASET(ncpzxxx.ABALMOD1)
VOLUME(xxxxxx) UNIT(SYSDA) SHR .
ADD DDDEF(ABALSAMP) DATASET(ncpzxxx.ABALSAMP)
VOLUME(xxxxxx) UNIT(SYSDA) SHR .
ENDUCL .
//*

```

Figure 18. JCL to Create DDDEF Entries

### Expected Return Codes and Messages:

DDDEF job ends with return code equal zero (RC=0).

## 6.1.6 Perform SMP/E RECEIVE

Edit and submit sample job NPSIREC to perform the SMP/E RECEIVE for X.25 NPSI V3R9 MVS. See Figure 19 on page 19 for the JCL to receive the data from the product tape.

```
//NPSIREC JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
/**
/* RECEIVE THE DATA FROM THE PRODUCT TAPE
/**
//RECV EXEC PGM=GIMSMP,PARM='DATE=U',REGION=4096K,
// TIME=1440
//SMPOUT DD SYSOUT=A
//SYSPRINT DD SYSOUT=A
//SMPCSI DD DSN=ncpzxxxx.GLOBAL.CSI,DISP=SHR
//SMPTLIB DD UNIT=SYSDA,DISP=OLD,VOL=SER=xxxxxx
//SMPPTFIN DD UNIT=tape,DISP=OLD,VOL=SER=XX3902,
// LABEL=(,SL),DSN=SMPMCS
//SMPCNTL DD *
SET BDY(GLOBAL) .
RECEIVE SELECT(HXX3902) SYSMODS LIST .
/*
```

Figure 19. JCL to Perform SMP/E RECEIVE

**Note:** If you obtained X.25 NPSI V3R9 MVS as part of a CBPDO, you can use the RCVPDO job found in the CBPDO RIMLIB data set to RECEIVE the X.25 NPSI V3R9 MVS FMIDs as well as any service, HOLDDATA, or preventive service planning (PSP) information included on the CBPDO tape. For more information, refer to the documentation included with the CBPDO.

### Expected Return Codes and Messages:

NPSIREC job ends with return code equal zero (RC=0).

## 6.1.7 Perform SMP/E APPLY CHECK

Edit and submit sample job NPSIAPCK to perform an SMP/E APPLY CHECK for X.25 NPSI V3R9 MVS. See Figure 20 on page 20 for the JCL to perform SMP/E APPLY CHECK.

```

//NPSIAPCK JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
/**
/** BEFORE ACTUALLY UPDATING THE TARGET LIBRARIES CHECK FOR
/** ERRORS, THE LIBRARIES AFFECTED, AND ANY SYSMODS THAT WOULD
/** BE REGRESSED
/**
//APPCK EXEC PGM=GIMSMP,PARM='DATE=U',REGION=4096K,
// TIME=1440
//SMPCSI DD DSN=ncpzxxxx.GLOBAL.CSI,DISP=SHR
//SMPCNTL DD *
SET BDY(ncptgt) .
APPLY SELECT(HXX3902) CHECK .
/**

```

Figure 20. JCL to Perform SMP/E APPLY CHECK

#### Expected Return Codes and Messages:

NPSIAPCK job ends with return code equal zero (RC=0).

### 6.1.8 Perform SMP/E APPLY

Edit and submit sample job NPSIAPP to perform an SMP/E APPLY for X.25 NPSI V3R9 MVS. See Figure 21 for the JCL to perform SMP/E APPLY.

```

//NPSIAPP JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
/**
/** UPDATE THE TARGET LIBRARIES
/**
//APPLY EXEC PGM=GIMSMP,PARM='DATE=U',REGION=4096K,
// TIME=1440
//SMPCSI DD DSN=ncpzxxxx.GLOBAL.CSI,DISP=SHR
//SMPCNTL DD *
SET BDY(ncptgt) .
APPLY SELECT(HXX3902) .
/**

```

Figure 21. JCL to Perform SMP/E APPLY

#### Expected Return Codes and Messages:

NPSIAPP job ends with return code equal zero (RC=0).

### 6.1.9 Perform SMP/E ACCEPT CHECK

Edit and submit sample job NPSIACCK to perform an SMP/E ACCEPT CHECK for X.25 NPSI V3R9 MVS. See Figure 22 on page 21 for the JCL to perform ACCEPT CHECK.

```

//NPSIACCK JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
/**
/** BEFORE ACTUALLY UPDATING THE DISTRIBUTION LIBRARIES CHECK
/** FOR ERRORS, THE LIBRARIES AFFECTED, AND ANY SYSMODS THAT
/** WOULD BE REGRESSED
/**
//ACCK EXEC PGM=GIMSMP,PARM='DATE=U',REGION=4096K,
// TIME=1440
//SMPCSI DD DSN=ncpzxxxx.GLOBAL.CSI,DISP=SHR
//SMPCNTL DD *
SET BDY(ncpdlib) .
ACCEPT SELECT(HXX3902) CHECK .
/**

```

Figure 22. JCL to Perform SMP/E ACCEPT CHECK

#### Expected Return Codes and Messages:

NPSIACCK job ends with return code equal zero (RC=0).

### 6.1.10 Perform SMP/E ACCEPT

Edit and submit sample job NPSIACC to perform an SMP/E ACCEPT for X.25 NPSI V3R9 MVS. See Figure 23 for the JCL to update the distribution library.

```

//NPSIACC JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
/**
/** UPDATE THE DISTRIBUTION LIBRARIES
/**
//ACCEPT EXEC PGM=GIMSMP,PARM='DATE=U',REGION=4096K,
// TIME=1440
//SMPCSI DD DSN=ncpzxxxx.GLOBAL.CSI,DISP=SHR
//SMPCNTL DD *
SET BDY(ncpdlib) .
ACCEPT SELECT(HXX3902) .
/**

```

Figure 23. JCL to Perform SMP/E ACCEPT

#### Expected Return Codes and Messages:

NPSIACC job ends with return code equal zero (RC=0).

### 6.1.11 Rejecting SMPTLIBs

If you kept the NOPURGE option in the sample CSIOPTS JCL provided with the NCP installation samples, you can reject the SMPTLIBs using the JCL shown in Figure 24 on page 22.

```

//NPSIREJ JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
//**
//*****
//*                                     **
//* THE SMP/E REJECT JOB WILL DELETE SOME OF THE **
//* CSI ENTRIES FROM THE SMPTLIB DATA SETS. IT DOES **
//* NOT DELETE NPSI V3R9 FROM THE CSI. **
//*                                     **
//* THIS JOB WILL DELETE: **
//*   GLOBAL ZONE SYSMOD ENTRIES **
//*   HOLDATA ENTRIES **
//*   SMPPTS MCS ENTRIES **
//*   ANY ASSOCIATED SMPTLIB ENTRIES **
//*                                     **
//* THIS JOB WILL GENERATE A NONZERO RETURN CODE **
//* IF THE SMPTLIBS HAVE BEEN PURGED FOR HXX3902. **
//*****
//      EXEC PGM=GIMSMP,PARM='DATE=U',REGION=4096K,
//          TIME=1440
//SMPOUT DD SYSOUT=A
//SYSPRINT DD SYSOUT=A
//SMPCSI DD DSN=ncpzxxxx.GLOBAL.CSI,DISP=SHR
//SMPCNTL DD *
//      SET BDY(GLOBAL) .
//      REJECT S(HXX3902)
//          BYPASS(APPLYCHECK,ACCEPTCHECK) .
//**

```

Figure 24. JCL to Reject SMP/E Entries and SMPTLIBs

### Expected Return Codes and Messages:

NPSIREJ job ends with return code equal zero (RC=0), unless the SMPTLIB data sets have been purged.

## 6.2 Post-Installation Information

The SSP, NCP, and controller-resident NCP-related products share post-installation procedures. After you install all products needed for the system environment, your system is ready for post-installation maintenance processing. If a PTF cumulative service tape is included with the order, install the maintenance now.

If PTFs containing replacement modules are being ACCEPTed, SMP/E ACCEPT processing will linkedit/bind the modules into the distribution libraries. During this processing, the Linkage Editor or Binder might issue messages documenting unresolved external references, resulting in a return code of 4 from the ACCEPT step. These messages can be ignored because the distribution libraries are not executable and the unresolved external references will not affect the executable system libraries.

To re-linkedit the NCP load modules under SMP/E, you may need to add a LOADNCP DD statement to the DDDEF job. The LOADNCP DD statement must point to the library that contains your NCP load modules. For an example, see the SYSLMOD DD statement in the *Network Control Program, System Support Programs, and Emulation Program Generation and Loading Guide*.

It is not necessary to ACCEPT NPSI PTF maintenance before performing the generations or link-edits. This release of NPSI is packaged with system target libraries in addition to the normal distribution libraries. These system target libraries are updated during APPLY processing.

Run the HONE Configurator to determine your new load module size after installation. Storage requirements and load module size usually change from release to release, which affects the number of buffers in the buffer pool. Contact your IBM representative for assistance.





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## Appendix A. Install Logic

---

### A.1 SMP/E Modification Control Statements

The SMP/E Modification Control Statements (SMPMCS) for X.25 NPSI V3R9 MVS are contained in the SMPMCS file on the installation tape. The SMPMCS for each FMID in the product will be loaded to the SMPPTS dataset, with a member name matching the FMID, when the FMID is SMP/E RECEIVED. You may browse or print these members using TSO/E, ISPF, or IEBGENER (or IEBPTPCH).

This appendix contains a portion of the installation logic for this program.

If you ordered this program as an individual product (not in a CBIPO or CBPDO), the entire set of SMP/E modification control statements (MCS) for the installation can be obtained by printing the first file of the product tape.

Figure 25 provides a portion of the SMP/E installation logic for X.25 NPSI V3R9 MVS.

```
++FUNCTION(HXX3902) FESN(8503501) REWORK(1998204)
RFDSNPFX(IBM)          /* TIME=09.41.50  DATE=07/23/98 */
FILES(3)
/*****
/* COPYRIGHT = LICENSED MATERIALS - PROPERTY OF IBM */
/* THIS PRODUCT CONTAINS "RESTRICTED MATERIALS OF IBM"*/
/* 5688-035 (C) COPYRIGHT IBM CORP, 1984, 1998.    */
/* ALL RIGHTS RESERVED.                            */
/* U.S. GOVERNMENT USERS RESTRICTED RIGHTS -      */
/* USE, DUPLICATION OR DISCLOSURE RESTRICTED BY   */
/* GSA ADP SCHEDULE CONTRACT WITH IBM CORP.       */
/* SEE COPYRIGHT INSTRUCTIONS.                    */
*****/
.
++VER(P004)
DELETE(HXX2102,HXX3102,HXX3202,HXX3302,HXX3402,HXX3502,HXX3602,
HXX3702,HXX3802)
.
++JCLIN                RELFILE(1) .
```

Figure 25. Installation Logic

You can browse these members using TSO/E or ISPF, or Figure 26 on page 26 provides a sample job to print the SMPMCS.

```
//NPSLOGIC JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
//GENER EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=A
//SYSUT1 DD UNIT=tape,DISP=OLD,VOL=SER=XX3902,
// LABEL=(1,SL),DSN=SMPMCS
//SYSUT2 DD SYSOUT=A
//SYSIN DD DUMMY
//*
```

*Figure 26. Job to Print the SMP/E Modification Control Statements*

**Expected Return Codes and Messages:**

NPSLOGIC job ends with return code equal zero (RC=0).

---

## Appendix B. APARs Incorporated into this Program

The following NPSI V3R8 APARs are incorporated into this program:

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



# Reader's Comments

## Program Directory for X.25 NPSI V3R9 for MVS

You may use this form to comment about this document, its organization, or subject matter with the understanding that IBM may use or distribute whatever information you supply in any way it believes appropriate without incurring any obligation to you.

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.

RATING SCALE					
very satisfied	<----->	very dissatisfied	not applicable		
1	2	3	4	5	N

	Satisfaction					
Ease of product installation	1	2	3	4	5	N
Contents of program directory	1	2	3	4	5	N
Installation Verification Programs	1	2	3	4	5	N
Time to install the product	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
Ease of getting the system into production after installation	1	2	3	4	5	N

What order media was this product received?

- CBIPO
- CBPDO
- Independent
- Other

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 MVS products?

- Yes
- No

If yes, how many years? \_\_\_

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

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Please provide the following contact information:

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Thank you for your participation.

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

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Dept. CGF/Bldg. 656  
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