



**Program Directory for  
Advanced Communications Function (ACF)  
Network Control Program (NCP)**

Version 7 Release 7

Program Number 5648-063

FMID HNC7702

for Use with  
MVS/ESA  
OS/390

Document Date: September 1998

G110-0986-00

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# Contents

Notices	vii
Notice to Users of Online Versions of This Book	viii
Trademarks	ix
<b>1.0 Introduction</b>	<b>1</b>
1.1 NCP V7R7 MVS FMIDs	2
<b>2.0 Program Materials</b>	<b>3</b>
2.1 Basic Machine-Readable Material	3
2.2 Optional Machine-Readable Material	4
2.3 Program Publications	4
2.3.1 Basic Program Publications	4
2.3.2 Optional Basic Program Publications	5
2.3.3 Optional Licensed Program Publications	5
2.3.4 Softcopy Publications	6
2.3.5 Publications Associated with NCP V7R7 MVS	6
2.4 Program Source Materials	7
2.5 Publications Useful During Installation	7
<b>3.0 Program Support</b>	<b>9</b>
3.1 Program Services	9
3.2 Preventive Service Planning	9
3.3 Statement of Support Procedures	9
<b>4.0 Program and Service Level Information</b>	<b>11</b>
4.1 Program Level Information	11
4.2 Service Level Information	11
4.3 Cumulative Service Tape	11
<b>5.0 Installation Requirements and Considerations</b>	<b>13</b>
5.1 Driving System Requirements	13
5.1.1 Operating System Requirements	13
5.1.2 Machine Requirements	13
5.1.3 Programming Requirements	13
5.2 Target System Requirements	13
5.2.1 Machine Requirements	14
5.2.1.1 Controller RPQs	16
5.2.2 Programming Requisites	18
5.2.2.1 Minimum Requisites	18
5.2.2.2 Functional Requisites	18
5.2.2.2.1 Host Resident Programs	18
5.2.2.2.2 Controller-Resident Programs	19

5.2.2.3 Compatibility Requisites . . . . .	20
5.2.2.3.1 NCP . . . . .	20
5.2.2.3.2 VTAM . . . . .	20
5.2.2.3.3 NPM . . . . .	24
5.2.2.3.4 TPF . . . . .	26
5.2.2.3.5 NetView . . . . .	26
5.2.2.3.6 TCAM . . . . .	27
5.2.2.3.7 TCP/IP . . . . .	27
5.2.2.4 Toleration/Coexistence Requisites . . . . .	28
5.2.2.5 Incompatibility (Negative) Requisites . . . . .	29
5.3 DASD Storage Requirements . . . . .	29
5.3.1 Storage Requirements for SMPCSI VSAM Cluster . . . . .	29
5.3.2 Storage Requirements for the SMP/E Work Data Sets . . . . .	30
5.3.3 Storage Requirements for NCP and NCP-Related Products . . . . .	31
5.4 FMIDs Deleted . . . . .	32
5.5 Special Considerations . . . . .	32
<b>6.0 Installation Instructions . . . . .</b>	<b>33</b>
6.1 Installing NCP V7R7 MVS . . . . .	33
6.1.1 SMP/E Considerations for Installing NCP V7R7 MVS . . . . .	33
6.1.2 SMP/E Environment . . . . .	33
6.1.3 SMP/E Options Subentry Values . . . . .	33
6.1.4 Unload the Sample JCL from the Product Tape . . . . .	34
6.1.5 Allocate SMP/E Target and Distribution Libraries . . . . .	34
6.1.6 Allocate Non-VSAM SMP/E Data Sets (Optional) . . . . .	35
6.1.7 Allocate the VSAM CSI Data Sets (Optional) . . . . .	36
6.1.8 Initialize the VSAM CSI Data Sets (Optional) . . . . .	38
6.1.9 Create DDDEF Entries . . . . .	40
6.1.10 Perform SMP/E RECEIVE . . . . .	44
6.1.11 Perform SMP/E APPLY CHECK . . . . .	45
6.1.12 Perform SMP/E APPLY . . . . .	46
6.1.13 Perform SMP/E ACCEPT CHECK . . . . .	46
6.1.14 Perform SMP/E ACCEPT . . . . .	47
6.1.15 Rejecting SMPTLIBs (Optional) . . . . .	47
6.2 Post-Installation Information . . . . .	48
6.3 Post-Installation Considerations . . . . .	49
6.3.1 For an NCP-Only System . . . . .	49
6.3.2 For a PEP (NCP and EP) System . . . . .	49
6.3.3 For an EP Standalone System . . . . .	49
<b>Appendix A. Install Logic . . . . .</b>	<b>51</b>
A.1 SMP/E Modification Control Statements . . . . .	51
<b>Appendix B. APARs Incorporated into this Program . . . . .</b>	<b>53</b>
<b>Reader's Comments . . . . .</b>	<b>55</b>

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## Figures

1.	NCP Base Material: Program Tape	4
2.	Base Program Tape: File Content	4
3.	Basic Material: Program Publications	5
4.	Optional Basic Program Publications	5
5.	Optional Material: Licensed Program Publications	5
6.	Softcopy Publications	6
7.	Publications Associated with NCP V7R7 MVS	6
8.	Publications Useful During Installation	7
9.	PSP Information	9
10.	Component IDs	9
11.	Driving System Software Requirements	13
12.	Minimum Microcode Levels for the 3745	16
13.	3745 RPQs	17
14.	Minimum Requisites	18
15.	Host-Resident Programs/Functional Requisites	19
16.	Controller-Resident Programs/Functional Requisites	19
17.	Functional Requisites	20
18.	NCP APAR required for NCP V7R1 compatibility with NCP V7R7.	20
19.	VTAM APAR Required for IP Support over 3745 Frame Relay Switched Physical Lines.	20
20.	VTAM APAR Required for Frame Relay Switched Dial Backup Support	20
21.	VTAM APAR Required for APPN Logical Resource Depletion Notification	21
22.	VTAM APAR Required for PU and LU Name Association between Host and Downstream Device Support	21
23.	VTAM APAR Required for NCP Frame Relay Over Token Ring	21
24.	VTAM APARs Required to Communicate with NCP V7R7 MVS	21
25.	VTAM APAR Required for Compatibility with NCP Spare SDLC Lines	21
26.	VTAM APARs Required for Compatibility with NCP Frame Relay	22
27.	APARs Required for NCP IP Over FR Dynamic Reconfiguration function	22
28.	APARs Required for Casual Connection and/or NNNC	22
29.	VTAM APARs Required for Selective NNNA Support	22
30.	VTAM APARs Required to Delay Activating Logical Links	23
31.	VTAM APARs Required to Support NCP ESCON	23
32.	VTAM APARs Required to Perform Route INOP Reduction	23
33.	VTAM APARs Required for Coding MAXDATA for PU4s	24
34.	VTAM APAR Required for NetView and STATMON.	24
35.	VTAM APAR Required for NCP Frame Relay Peripheral Node Support	24
36.	NPM APAR Required for NCP V7R7 MVS and NCP IP Over Token Ring	24
37.	NPM APAR Required for ODLC LAN HPR data collection	24
38.	NPM APARs Required for 3746 Model 900 TIC3	25
39.	NPM APARs Required for 3746 Model 900 Processor	25
40.	NPM APARs Required for 3746 Model 900 X.25 NPSI	25
41.	NPM APARs Required for NCP Dynamic Control Blocks	25

42.	NPM APAR Required for NCP	25
43.	NPM APARs Required for Compatibility with NCP Frame Relay	26
44.	NPM APARs Required for 3746 Model 900 X.25 ODLC function	26
45.	NPM APAR Required for 3746 Model 900 ISDN function	26
46.	TPF APARs and PTF Required for NCP	26
47.	NetView APARs Required for Enhanced LPDA2 Support for 786x Modems	26
48.	NetView APARs Required for Compatibility with NCP	27
49.	TCAM APAR	27
50.	TCP/IP APAR Required for Variable Length Subnet Mask	27
51.	TCP/IP APAR Required for RIP V2 Support	27
52.	TCP/IP APARs Required for Dynamic Internet Routing Over Frame Relay	28
53.	TCP/IP APARs Required for Compatibility with NCP	28
54.	TCP/IP APARs Required for Direct IP Channel Communication	28
55.	TCP/IP APAR Required for NCP Dynamic Internet Routing Function	28
56.	TCP/IP APAR Required for IP NCPROUTE Direct Over Channel	28
57.	Storage Requirements for SMPCSI VSAM Cluster	30
58.	Storage Requirements for SMP/E Work Data Sets	30
59.	Storage Requirements for SMP/E Data Sets	30
60.	Storage Requirements for NCP V7R7 MVS Target Libraries	31
61.	Storage Requirements for NCP V7R7 MVS Distribution Libraries	31
62.	Storage Requirements for NCP and NCP-Related Products	32
63.	Character String Descriptions	33
64.	Storage Requirements for SMP/E Subentries	34
65.	JCL to Unload the Installation JCL	34
66.	JCL to Allocate Target and Distribution libraries	35
67.	JCL to Allocate Non-VSAM SMP/E Data Sets (Optional)	36
68.	JCL to Allocate CSI Data Set (Optional)	37
69.	JCL to Add Necessary Entries and Utilities to SMP/E CSI Data Sets (Optional)	39
70.	JCL to Create DDDEF Entries	41
71.	JCL to Perform SMP/E RECEIVE	45
72.	JCL to Perform SMP/E APPLY CHECK	45
73.	JCL to Perform SMP/E APPLY	46
74.	JCL to Perform SMP/E ACCEPT CHECK	46
75.	JCL to Perform SMP/E ACCEPT	47
76.	JCL to Reject SMP/E Entries and SMPTLIB (Optional)	48
77.	Installation Logic	51
78.	Job to Print the SMP/E Modification Control Statements	52

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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 NCP V7R7 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 NCP V7R7 MVS.
- 3.0, "Program Support" on page 9 describes the IBM support available for NCP V7R7 MVS.
- 4.0, "Program and Service Level Information" on page 11 describes the program and service level information incorporated into this program.
- 5.0, "Installation Requirements and Considerations" on page 13 identifies the resources and considerations for installing and using NCP V7R7 MVS.
- 6.0, "Installation Instructions" on page 33 provides detailed installation instructions for NCP V7R7 MVS.
- Appendix A, "Install Logic" on page 51 provides the install logic for NCP V7R7 MVS.
- Appendix B, "APARs Incorporated into this Program" on page 53 lists the APARs incorporated into NCP V7R7 MVS.

Before installing NCP V7R7 MVS, read 3.2, "Preventive Service Planning" on page 9. This section tells you how to find any updates to the information and procedures in this program directory.

The 3746 Model 900 CSS feature is a licensed offering that allows the operation of an IBM 3746 Model 900 attached to a 3745 Communication Controller. Prior to NCP V7R6, you were required to license, order, and install separate software media. Starting with NCP V7R6 the media containing the 3746 Model 900 CSS feature code has been incorporated into the base code of NCP. You are no longer required to install separate 3746 Model 900 CSS software media when attaching the IBM 3746 Model 900 to a 3745 Communication Controller. Please note that you **must** still obtain a license for the 3746 Model 900 CSS feature. Refer to the NCP V7R6 announcement letter dated September 9, 1997 for additional licensing instructions.

Airline Control Interconnect (ALCI) RPQ is a free feature offered in NCP V7R7. Previously, you were required to license, order, and install the ALCI RPQ as a separate feature. This ALCI RPQ has now been incorporated into the NCP V7R7 base product tape. You are no longer required to order and install separate media for ALCI. You must continue to license the ALCI feature as in previous releases. Refer to the NCP V7R7 announcement letter dated September, 1998 for additional hardware requirements information.

Starting with EP R14, users of EP Standalone must install NCP. Users of PEP and EP Standalone will now install EP in the NCP distribution libraries, ANCPMAC1 and ANCPMOD1, using the NCP target and distribution zones. A single EP installation can now be used in environments requiring both PEP and EP Standalone.

IBM recommends that you use an OS/390 ServerPac to install this level of NCP. 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 NCP V7R7 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 NCP V7R7 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 information for NCP V7R7 MVS is included on the CBPDO tape.

To facilitate the installation of NCP V7R7 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=ANCP SAMP, MEMBER=NCPINJCL. The JCL to unload the installation JCL is shown in Figure 65 on page 34.

**All occurrences of lower case variables must be changed to the appropriate uppercase values in order for the JCL to execute properly.**

At the end of this program directory you will find a Reader's Comment Form. Please take the 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.

A good place to start any task regarding this program is *NCP V7R7, SSP V4R7, and EP Release 14 Library Directory* (SC30-3971). It introduces the enhancements for the current release and shows where these enhancements are described in the NCP library. It gives you an overview of NCP, SSP, and EP and directs you to a variety of tasks related to these programs.

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## 1.1 NCP V7R7 MVS FMIDs

NCP V7R7 MVS consists of FMID HNC7702.

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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 NCP V7R7 MVS is 5648-063. The feature numbers associated with this release are provided in the following sections.

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 NCP V7R7 MVS. Ask your IBM marketing representative for this information if you have not already received a copy.

The following sections identify:

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

---

### 2.1 Basic Machine-Readable Material

This section describes the basic machine-readable material for NCP V7R7.

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 it is in SMP/E RELFILE format. See section 6.0, "Installation Instructions" on page 33 for more information about how to install the program.

Figure 1 describes the tape or cartridge.

#### Notes:

1. If you are installing NCP V7R7 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.
2. The program tape and cartridge contain "Restricted Materials of IBM."

Figure 1. NCP Base Material: Program Tape

Medium	Feature Number	Physical Volume	External Label Identification	VOLSER
6250 tape	5801	1	MVSOBJ HNC7702	NC7702
3480 cart.	5802	1	MVSOBJ HNC7702	NC7702
4 mm cart.	6498	1	MVSOBJ HNC7702	NC7702

Figure 2 describes the file content of the program tape or cartridge for NCP V7R7.

Figure 2. Base Program Tape: File Content

VOLSER	File	Name	Dist. Library	RECFM	LRECL	BLK Size
NC7702	1	SMPMCS		FB	80	6400
NC7702	2	IBM.HNC7702.F1	AMACLIB (JCLIN)	FB	80	8800
NC7702	3	IBM.HNC7702.F2	ANCPMAC1 ANCPSAMP	FB	80	8800
NC7702	4	IBM.HNC7702.F3	ANCPMOD1	U	0	6144

## 2.2 Optional Machine-Readable Material

There are no optional machine-readable materials for NCP V7R7 MVS

The IBM 3746 Model 900 Feature had been optional machine-readable material, but has recently been incorporated in the base code of NCP. Please see section 1.0, "Introduction" on page 1 for more information.

## 2.3 Program Publications

The following sections identify the basic, optional, and associated publications for NCP V7R7 MVS.

### 2.3.1 Basic Program Publications

Figure 3 identifies the basic program publications for NCP V7R7 MVS. One copy of each of these publications is included when you order the basic materials for NCP V7R7 MVS. For additional copies, contact your IBM representative.

Figure 3. Basic Material: Program Publications

Publication Title	Form Number
Licensed Program Specifications: Network Control Program Version 7 Release 7	GC31-6226
Network Control Program Version 7 Release 7 Migration Guide	SC30-3889
Network Control Program, System Support Programs, and Emulation Program Resource Definition Guide	SC31-6223
Network Control Program, System Support Programs, and Emulation Program Resource Definition Reference	SC31-6224
Planning for NetView, NCP, and VTAM	SC31-8063
Planning for Integrated Networks	SC31-8062

## 2.3.2 Optional Basic Program Publications

Figure 4. Optional Basic Program Publications

Publication Title	Form Number
NCP Version 7 and X.25 NPSI Version 3 Planning and Installation	SC30-3470
ALCI Licensed Program Specifications	GH33-7054
ALCI Installation and Operation	SH33-7013

## 2.3.3 Optional Licensed Program Publications

Figure 5 identifies the optional licensed program publications for NCP V7R7 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 additional copies.

Figure 5. Optional Material: Licensed Program Publications

Publication Title	Form Number	Feature Number First Copy	Feature Number Additional Copy
Network Control Program and Emulation Program Reference Summary and Data Areas	LY43-0030#	7100	8100
Network Control Program and Emulation Program Reference	LY43-0029#	7101	8101
Network Control Program (NCP) X.25 Diagnosis, Customization, and Tuning	LY30-5610#	7105	8103
ALCI Diagnosis Guide and Reference	LY33-7027#	7102	8102

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

## 2.3.4 Softcopy Publications

All NCP V7R7 MVS manuals, licensed and unlicensed, except for *NCP Licensed Program Specifications*, are offered in displayable softcopy form on the media listed in Figure 6.

Figure 6. 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#	7110	8110

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

## 2.3.5 Publications Associated with NCP V7R7 MVS

Figure 7 lists 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 7. Publications Associated with NCP V7R7 MVS

Publication Title	Form Number
Network Control Program, System Support Programs, and Emulation Program Diagnosis Guide	LY43-0033*
Network Control Program, System Support Programs, and Emulation Program Messages and Codes	SC31-6222
Network Control Program, System Support Programs, and Emulation Program Generation and Loading Guide	SC31-6221
Network Control Program Version 7 Release 7, System Support Programs Version 4 Release 7, and Emulation Program Release 14 Library Directory	SC30-3971
Network Control Program and System Support Programs Customization Guide	LY43-0031#
Network Control Program and System Support Programs Customization Reference	LY43-0032#
Network Control Program, System Support Programs, and Emulation Program Trace Analysis Handbook	LY43-0037#

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

No additional publications are provided for NCP V7R7.



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## 2.4 Program Source Materials

Microfiche is not provided with NCP V7R7 MVS. Customers with access to View Program Listings (VPL), such as through S/390 SoftwareXcel, can use the VPL facility for online viewing of available program listings. Those customers without access to VPL can contact their IBM representative.

---

## 2.5 Publications Useful During Installation

The publications listed in Figure 8 may be useful during installation of this program. To order copies, contact your IBM representative. A fee is charged for each publication.

*Figure 8. 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 NCP V7R7 MVS.

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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 NCP V7R7 MVS, you should review the current Preventive Service Planning (PSP) information. If you obtained NCP V7R7 MVS as part of a CBPDO, there is HOLDDATA and PSP information included on the CBPDO tape.

If you obtained NCP V7R7 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 NCP V7R7 MVS are:

Figure 9. PSP Information

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UPGRADE	SUBSET	Description
NCP770	HNC7702	NCP V7R7 MVS

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### 3.3 Statement of Support Procedures

For help with problem determination and problem source identification, refer to *Network Control Program, System Support Programs, and Emulation Program Diagnosis Guide*. Report any difficulties you have using this program to your IBM Support Center.

Figure 10 identifies the component ID (COMPID) and RETAIN Release for NCP V7R7 MVS.

Figure 10. Component IDs

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FMID	COMP ID	Component Name	REL
HNC7702	564806300	NCP V7R7	702

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

This section identifies the program and service level of NCP V7R7 MVS. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs integrated into the product. Information about the cumulative service tape is also provided.

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### **4.1 Program Level Information**

See Appendix B, "APARs Incorporated into this Program" on page 53 for a list of APAR fixes against previous releases of NCP incorporated into this release.

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### **4.2 Service Level Information**

No PTFs against this release of NCP 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. If this tape is included, it will be used in Section 6.2, "Post-Installation Information" on page 48. Installation instructions for cumulative service tapes can be found in the SMP/E publications.

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.



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## 5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing NCP V7R7 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.

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### 5.1 Driving System Requirements

This section describes the environment of the driving system required to install NCP V7R7 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 11. Driving System Software Requirements*

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<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

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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>.

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### 5.2 Target System Requirements

This section describes the environment of the target system required to install and use NCP V7R7 MVS.

## 5.2.1 Machine Requirements

This program operates on any IBM 3745 Communication Controller. The Controller Load and Dump Program (CLDP) is used to load and dump the 3745 when attached to the host via an OEMI channel, ESCON channel, or remotely via a 3745 base frame SDLC link through another controller. For other connections, loads and dumps require an active NCP and an owning VTAM. The MODIFY DUMP and MODIFY LOAD transfer facility commands of the owning VTAM are then used to load and dump the IBM 3745. For more information, refer to *IBM 3720/3745 Communication Controllers Remote Loading/Activation Guide* (SA33-0161).

The IBM 3745 Communication Controller must have the appropriate features and microcode level installed when the IBM 3745 expansion frame, the IBM 3746 Model 900, is installed. The IBM 3746 Model 900 provides ESCON attachment capability for the IBM 3745, as well as additional higher performance token-ring adapters, communication line adapters, and frame relay capability on the communication line adapters for the IBM 3745. The communication line adapters support SDLC, frame relay, X.25 NPSI with NPSI V3R8 or later, and X.25 ODLC.

When the 3746 Model 900 is attached, the NCP V7R7 3746 Model 900 feature license is required at the appropriate usage tier level.

For 3746 Model 900 IP internal coupling with NCP, the 3746 Model 900 Network Node Processor Feature 5022 or 5122, the IP Routing Feature 5033, and Feature 5800 are required.

For 3746 Model 900 Frame Relay and ISDN DYNWIND Keyword expanded options, Feature 5800 is required.

For the higher performance frame relay capability on the communication line adapters in the 3746 Model 900, Feature 5800 or ECA number 134 is required.

For Automatic Network Routing (ANR) over ESCON, Feature 5800 or ECA number 137 is required.

For High Performance Routing (HPR) using frame-relay on the communication line adapters in the 3746 Model 900, Feature 5800 or ECA number 137 is required.

For 3746 Model 900 processor performance and storage utilization NPM information, Feature 5800 or ECA number 137 is required.

For 3746 Model 900 TIC3 utilization NPM information, Feature 5800 or ECA number 137 is required.

For 3746 Model 900 communication line adapter X.25 NPSI support, Feature 5800 or ECA number 137 is required.

For 3746 Model 900 frame-relay Boundary Access Node (BAN) support, Feature 5800 or ECA number 138 is required.

For 3746 Model 900 frame-relay SAP multiplexing support, Feature 5800 or ECA number 138 is required.



For 3746 Model 900 frame-relay HPR NPM information, Feature 5800 or ECA number 138 is required.

For 3746 Model 900 Network Node tier C level support, Feature 5800 or ECA number 146 (EC # D22560D) is required.

For 3746 Model 900 X.25 support, Feature 5800 or ECA number 146 (EC # D22560D) is required.

For 3746 Model 900 frame-relay frame handler switching, Feature 5800 or ECA number 146 (EC # D22560D) is required.

For 3746 Model 900 native IP over ESCON support, Feature 5800 or ECA number 142 (EC # D22510) is required.

For 3746 Model 900 ESCON reporting of an offline sequence as an INOP01, microcode fix MCF MD22414.418 is required.

For 3746 Model 900 HPR non-ERP over TIC3 support, Feature 5800 or ECA number 146 (EC # D22560D) is required.

For 3746 Model 900 ISDN primary rate, Feature 5800 or ECA number 159 (EC # D22570D) is required.

For 3746 Model 900 duplicate TIC addressing, Feature 5800 or ECA number 157 (EC # D22570C) is required.

For 3746 Model 900 frame-relay Boundary Access Node (BAN) for subarea links, Feature 5800 or ECA number 157 (EC # D22570C) is required.

For 3746 Model 900 TIC3 and ESCON port sharing between the network node processor (NNP) and NCP, Feature 5800 or ECA number 155 is required.

For 3746 Model 900 frame-relay port sharing between the network node processor (NNP) and NCP, Feature 5800 or ECA number 157 is required.

For 3746 Model 900 X.25 port sharing between the network node processor (NNP) and NCP, Feature 5800 or ECA number 167 is required.

For 3746 Model 900 Automatic Network Routing (ANR) over frame-relay Boundary Access Node (BAN), Feature 5800 or ECA number 155 is required.

For 3746 Model 900 NPM support for ISDN, Feature 5800 or ECA number 167 is required.

For 3746 Model 900 HPR over X.25 ODLC, Feature 5800 or ECA number 146 (EC # D22560D) is required.

For 3746 Model 900 Frame Relay automatic backup over ISDN, Feature 5800 or ECA number 167 is required.

For 3746 Model 900 ESCON retrying of the activation if the host is powered off, microcode fix MCF MD22714.403 is required.

For 3746 Model 900 duplicate TIC addressing for subarea connections, EC # D46130 is required.

For 3746 Model 900 support for RIP V2 multicasting, ESS microcode patch EGAL2 is required.

A microcode EC for the 3745 is required for the Dynamic Internet Protocol routing function of this program when using the Ethernet Subsystem (ESS). Following are the minimum 3745 microcode EC levels to support this function:

*Figure 12. Minimum Microcode Levels for the 3745*

<b>EC Number</b>	<b>Model</b>
C37967	210, 310, 410, 610
C38006	130, 150, 160, 170
D39894	21A, 31A, 41A, 61A
D40002	17A

For 3746 Model 900 support for

- Committed Information Rate (CIR) on frame-relay lines controlled by NCP
- frame-relay switched support for frame-relay switched lines controlled by NCP
- routing information change (RIF) notification to NTuneMON after a non-disruptive route switch for connections on a TIC3

Feature Number 5800 and ECA 185 are required with one of the following:

- Service Processor Type 2 (feature number 5052)
- Service Processor Part Number 55H7630 (feature number 5021 - type 3172 with Pentium 90 processor) equipped with
  - CD-ROM drive (feature number 5051)
  - Service Processor memory expansion (feature number 5028)

The NCP V7R7 minimum size load module may exceed 1 megabyte. This is supported in base microcode levels for the x1A and 17A models. Patches exist for x10 and 1x0 models. Please see Technical Data Recording (TDR) H124890 for more information.

### **5.2.1.1 Controller RPQs:**

NCP V7R7 MVS, through the Airline Control Interconnect feature, provides support for the 3745 RPQs listed in Figure 13 on page 17.

Airline Control (ALCI) RPQ is a free feature offered in NCP V7R7. Previously, you were required to license, order, and install the ALCI RPQ as a separate feature. This ALCI RPQ has now been incorporated into the NCP V7R7 base product tape. You are no longer required to order and install separate media for ALCI. You must continue to license the ALCI feature as in previous releases.

Refer to the NCP V7R7 announcement letter dated September 1998 for additional hardware requirements information.

*Figure 13. 3745 RPQs*

<b>RPQ Number</b>	<b>Controller</b>
7L1092	3745 Models 210, 310, 410, 610 (21A, 31A, 41A, 61A)
7L1216	3745 Models 210, 310, 410, 610 (21A, 31A, 41A, 61A)
7L1148	3745 Model 170
7L1148	3745 Model 160 (EMEA Countries)
7L1213	3745 Model 160 (EMEA Countries)

## 5.2.2 Programming Requisites

### 5.2.2.1 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. 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.

TCAM or VTAM can reside in the host depending upon the specific requirements of the customer installation.

This program is generated using SSP V4R7 for MVS. In addition to providing the generation function for this release, SSP provides utilities for loading, dumping, and trace formatting for NCP.

This program is supported with the following licensed programs (see Figure 14) at the function level of the version and release for as long as program services are available for the particular version and release.

Figure 14. Minimum Requisites

Program Number	Product Name and Minimum VRM/Service Level	Install Req?
5655-041	System Support Program Version 4 Release 7	No
5735-RC3	TCAM Version 2 Release 4	No
5647-A01	OS/390 Release 4 or later	No
5645-001	OS/390 Releases 1, 2, or 3	No
5695-117	VTAM Version 4 Release 1 or later	No
5665-289	VTAM Version 3 Release 3 or higher	No

**Note:** Refer to section 5.2.2.3, "Compatibility Requisites" on page 20 for specific requirements for VTAM.

### 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.

#### 5.2.2.2.1 Host Resident Programs

Figure 15. Host-Resident Programs/Functional Requisites

Program Number	Product Name and Minimum VRM/Service Level	Install Req?
5648-141	NTuneMON Version 2 Release 5	No
5685-111	NetView Version 2 Release 1 or higher	No
5697-B82	TME 10 for OS/390 Version 1 Release 1 or higher	No
5665-333	NetView Performance Monitor Version 1 Release 6 or higher	No
5748-T13	Transaction Processing Facility (TPF) Version 3 or higher	No
<b>Note:</b> Either Type 5 or Type 2.1 attachment capability is provided. Type 5 attachment requires SNA Network Interconnection (SNI) support in the channel-attached NCP. See Controller RPQs for related 3745 RPQs supported by NCP V7R7 MVS.		
5735-HAL	TCP/IP Version 2 Release 2 or higher	No

Refer to section 5.2.2.3, "Compatibility Requisites" on page 20 for specific requirements for these programs.

#### 5.2.2.2.2 Controller-Resident Programs:

One or more of the following programs can reside in the controller depending upon the specific requirements of the customer installation.

Figure 16. Controller-Resident Programs/Functional Requisites

Program Number	Product Name and Minimum VRM/Service Level	Install Req?
5735-XXB	Emulation Program Release 14	No
5735-XX7	Network Terminal Option (NTO) R11	No
5668-963	Network Routing Facility (NRF) Release 9	No
5668-035	X.25 NCP Packet Switching Interface Version 3 Release 9	No
5668-042	X.21 Short Hold Mode/Multiple Port Sharing (X.21 SH/MPS) Version 2 Release 3.1	No
5685-035	X.25 SNA Interconnection (XI) Program Product Version 2 Release 4.2	No

**Note:** Use of the Partitioned Emulation Programming (PEP) extension of NCP for MVS requires the appropriate release of the Emulation Program (EP) for IBM Communication Controllers.

The following levels of NCP are supported as communicating with NCP V7R7 MVS as long as program services are available for the particular level of NCP.

Figure 17. Functional Requisites

Program Number	Product Name and Minimum VRM/Service Level	Install Req?
5668-854	NCP Version 4 Release 3.1	No
5668-738	NCP Version 5 Release 4	No
5668-231	NCP Version 6 Release 2 or higher	No
5648-063	NCP Version 7 Release 3 or higher	No

### 5.2.2.3 Compatibility Requisites:

The following sections contain system considerations for NCP, VTAM, NPM, TPF, NetView, TCAM, and TCP/IP.

#### 5.2.2.3.1 NCP:

The NCP APAR listed in Figure 18 is required for NCP V7R1 NTRI subarea links to be compatible with NCP V7R7.

Figure 18. NCP APAR required for NCP V7R1 compatibility with NCP V7R7.

Product Name	APAR
NCP V7R1	IR32286

#### 5.2.2.3.2 VTAM:

The VTAM APAR shown in Figure 19 is required for IP support over 3745 Frame Relay Switched physical lines.

Figure 19. VTAM APAR Required for IP Support over 3745 Frame Relay Switched Physical Lines.

Product Name	APAR
VTAM V4R4	OW34198
OS/390 R5	OW34198
OS/390 R6	OW34198

The VTAM APAR shown in Figure 20 is required for 3745 and 3746 Model 900 Frame Relay Switched Dial Backup support.

Figure 20. VTAM APAR Required for Frame Relay Switched Dial Backup Support

Product Name	APAR
VTAM V4R4	OW27985

The VTAM APAR shown in Figure 21 on page 21 is required for APPN Logical Resource Depletion Notification.

*Figure 21. VTAM APAR Required for APPN Logical Resource Depletion Notification*

<b>Product Name</b>	<b>APAR</b>
VTAM V4R4	OW25754

The VTAM APAR shown in Figure 22 is required for PU and LU Name Association between Host and Downstream Device support.

*Figure 22. VTAM APAR Required for PU and LU Name Association between Host and Downstream Device Support*

<b>Product Name</b>	<b>APAR</b>
VTAM V4R4	OW25501

The VTAM APAR listed in Figure 23 is required for the NCP Frame Relay over Token Ring function.

*Figure 23. VTAM APAR Required for NCP Frame Relay Over Token Ring*

<b>Product Name</b>	<b>APAR</b>
VTAM V4R2 MVS/ESA	OW09797
VTAM V4R2 VSE/ESA	DY44000

The VTAM APARs listed in Figure 24 are required for the VTAM levels listed to communicate with NCP V7R7 MVS.

*Figure 24. VTAM APARs Required to Communicate with NCP V7R7 MVS*

<b>Product Name</b>	<b>APAR</b>
VTAM V3R2 MVS/XA	OY22547
VTAM V3R2 MVS/370	OY23877
VTAM V3R2 VM	VM37705
VTAM V3R2 VSE	DY38541

The VTAM APAR listed in Figure 25 is required for compatibility with NCP Spare SDLC lines support.

*Figure 25. VTAM APAR Required for Compatibility with NCP Spare SDLC Lines*

<b>Product Name</b>	<b>APAR</b>
VTAM V4R2 MVS/ESA	OW06708

The VTAM APARs listed in Figure 26 are required for compatibility with NCP Frame Relay support.

Figure 26. VTAM APARs Required for Compatibility with NCP Frame Relay

Product Name	APAR
VTAM V4R1 MVS/ESA	OW04338
VTAM V4R2 MVS/ESA	OW04338
VTAM V4R1 MVS/ESA	OW04575
VTAM V4R2 MVS/ESA	OW04575
VTAM V4R1 MVS/ESA	OW05013
VTAM V4R2 MVS/ESA	OW05013
VTAM V4R2 MVS/ESA	OW06065

The VTAM APARs listed in Figure 27 are required for the NCP Internet Protocol over Frame Relay Dynamic Reconfiguration function.

Figure 27. APARs Required for NCP IP Over FR Dynamic Reconfiguration function

Product Name	APAR
VTAM V4R3 MVS/ESA	OW15600

The VTAM APARs listed in Figure 28 are required for casual connection and/or NNNC.

Figure 28. APARs Required for Casual Connection and/or NNNC

Product Name	APAR
VTAM V3R3 MVS/ESA	OY30487
VTAM V3R3 MVS/ESA	OY30488
VTAM V3R2.1 VM	VM40123
VTAM V3R2.1 VSE	DY39165
VTAM V3R2 MVS/XA	OY26312
VTAM V3R2 MVS/XA	OY26327
VTAM V3R2 MVS/370	OY29600

The VTAM APARs listed in Figure 29 are required for selective NNNA support.

Figure 29. VTAM APARs Required for Selective NNNA Support

Product Name	APAR
VTAM V3R3 MVS/ESA	OY52318
VTAM V3R4 MVS/ESA	OY52318
VTAM V3R4.1 MVS/ESA	OY52318
VTAM V3R3 MVS/XA	OY52319



The VTAM APARs listed in Figure 30 on page 23 are required to delay activating logical links until the associated physical resources are active.

*Figure 30. VTAM APARs Required to Delay Activating Logical Links*

<b>Product Name</b>	<b>APAR</b>
VTAM V3R4.1 MVS/ESA	OY55462
VTAM V3R4.1 MVS/ESA	OY55304

The VTAM APARs listed in Figure 31 are required to support the NCP ESCON function.

*Figure 31. VTAM APARs Required to Support NCP ESCON*

<b>Product Name</b>	<b>APAR</b>
VTAM V3R3 MVS/ESA	OY58783
VTAM V3R3 MVS/ESA	OY29256
VTAM V3R3 MVS/ESA	OY35599
VTAM V3R3 VM/ESA	VM54982
VTAM V3R4 MVS/ESA	OY58783
VTAM V3R4.1 MVS/ESA	OY58783
VTAM V3R4.1 MVS/ESA	OY52595
VTAM V3R4.1 MVS/ESA	OY52888
VTAM V3R4.1 MVS/ESA	OY57157

The VTAM APARs listed in Figure 32 are required to reduce the number of messages generated when a ROUTE INOP occurs.

*Figure 32. VTAM APARs Required to Perform Route INOP Reduction*

<b>Product Name</b>	<b>APAR</b>
VTAM V3R4 MVS/ESA	OY48223
VTAM V3R4.1 MVS/ESA	OY48223

The VTAM APARs listed in Figure 33 are required to avoid VTAM error messages when coding the MAXDATA keyword for PU4s in the NCP definition.

Figure 33. VTAM APARs Required for Coding MAXDATA for PU4s

<b>Product Name</b>	<b>APAR</b>
VTAM V3R3 MVS/ESA	OY58078
VTAM V3R3 MVS/XA	OY58281
VTAM V3R4 MVS/ESA	OY58078
VTAM V3R4.1 MVS/ESA	OY58078
VTAM V3R3 VM/SP	VM54590
VTAM V3R3 VM/ESA	VM54591
VTAM V3R4.1 VM/SP	VM54903
VTAM V3R4.1 VM/ESA	VM54904

The VTAM APAR listed in Figure 34 is required for users of NetView and STATMON.

Figure 34. VTAM APAR Required for NetView and STATMON.

<b>Product Name</b>	<b>APAR</b>
VTAM V3R4.1 MVS/ESA	OY55988

The VTAM APAR listed in Figure 35 is required for compatibility with NCP Frame Relay Peripheral Node support.

Figure 35. VTAM APAR Required for NCP Frame Relay Peripheral Node Support

<b>Product Name</b>	<b>APAR</b>
VTAM V4R1	OW00206

#### **5.2.2.3.3 NPM:**

The NPM APAR listed in Figure 36 is required for compatibility with NCP V7R7 MVS. This APAR is also required for the NCP Internet Protocol over Token Ring function.

Figure 36. NPM APAR Required for NCP V7R7 MVS and NCP IP Over Token Ring

<b>Product Name</b>	<b>APAR</b>
NPM V2R2 MVS/ESA	OW12520

The NPM APAR listed in Figure 37 is required for ODLC LAN HPR data collection.

Figure 37. NPM APAR Required for ODLC LAN HPR data collection

<b>Product Name</b>	<b>APAR</b>
NPM V2R2 MVS/ESA	OW17876

The NPM APARs listed in Figure 38 on page 25 are required for the 3746 Model 900 TIC3 utilization NPM information function.

*Figure 38. NPM APARs Required for 3746 Model 900 TIC3*

<b>Product Name</b>	<b>APAR</b>
NPM V2R1 MVS/ESA	OW10584
NPM V2R2 MVS/ESA	OW10584

The NPM APARs listed in Figure 39 are required for the 3746 Model 900 processor utilization NPM information function.

*Figure 39. NPM APARs Required for 3746 Model 900 Processor*

<b>Product Name</b>	<b>APAR</b>
NPM V2R1 MVS/ESA	OW08565
NPM V2R2 MVS/ESA	OW08565

The NPM APARs listed in Figure 40 are required for the 3746 Model 900 X.25 NPSI function.

*Figure 40. NPM APARs Required for 3746 Model 900 X.25 NPSI*

<b>Product Name</b>	<b>APAR</b>
NPM V2R1 MVS/ESA	OW10583
NPM V2R2 MVS/ESA	OW10583

The NPM APARs listed in Figure 41 are required for the NCP Dynamic Control Blocks function.

*Figure 41. NPM APARs Required for NCP Dynamic Control Blocks*

<b>Product Name</b>	<b>APAR</b>
NPM V2R1 MVS/ESA	OW09271
NPM V2R2 MVS/ESA	OW09271

The NPM APAR listed in Figure 42 is required for compatibility with NCP.

*Figure 42. NPM APAR Required for NCP*

<b>Product Name</b>	<b>APAR</b>
NPM V1R6 MVS	OY66928

The NPM APARs listed in Figure 43 are required for compatibility with NCP Frame Relay on 3746 Model 900 support.

Figure 43. NPM APARs Required for Compatibility with NCP Frame Relay

Product Name	APAR
NPM V2R1 MVS/ESA, MVS/XA, VM/ESA	OW07715
NPM V2R2 MVS/ESA, VM/ESA	OW07715

The NPM APARs listed in Figure 44 are required for the 3746 Model 900 X.25 ODLC function.

Figure 44. NPM APARs Required for 3746 Model 900 X.25 ODLC function

Product Name	APAR
NPM V2R1	OW19297
NPM V2R2	OW19297

The NPM APAR listed in Figure 45 is required for the 3746 Model 900 ISDN function.

Figure 45. NPM APAR Required for 3746 Model 900 ISDN function

Product Name	APAR
NPM V2R2	OW18882

#### 5.2.2.3.4 TPF:

If you use the TPF, the APARs and PTF level shown in Figure 46 are required for compatibility with NCP.

Figure 46. TPF APARs and PTF Required for NCP

Product Name	APAR or PTF
TPF V3R1	WP12070
TPF V3R1	WP11843
TPF V3R1	PTF Level 16

#### 5.2.2.3.5 NetView:

The NetView APARs listed in Figure 47 are required for enhanced LPDA2 support for 786x modems.

Figure 47. NetView APARs Required for Enhanced LPDA2 Support for 786x Modems

Product Name	APAR or PTF
NetView V1R3 MVS	OY21453
NetView V1R3 VM	VM37606 VM39084

The NetView APARs listed in Figure 48 are required for compatibility with NCP.

Figure 48. NetView APARs Required for Compatibility with NCP

Product Name	APAR
NetView V2R1 MVS/ESA	OY53410
NetView V2R2 MVS/ESA	OY53410
NetView V2R1 MVS/XA	OY53578
NetView V2R2 MVS/XA	OY53578
NetView V1R3 MVS/ESA	OY53579
NetView V1R3 MVS/XA	OY53580

#### 5.2.2.3.6 TCAM:

The TCAM APAR listed in Figure 49 is required if your NCP is channel-attached to TCAM.

Figure 49. TCAM APAR

Product Name	APAR
TCAM V2R4 MVS	OY25731

#### 5.2.2.3.7 TCP/IP:

The TCP/IP APAR listed in Figure 50 is required for Variable Length Subnet Mask support.

Figure 50. TCP/IP APAR Required for Variable Length Subnet Mask

Product Name	APAR
TCP/IP V3R2	PQ02781

The TCP/IP APAR listed in Figure 51 is required for RIP V2 support.

Figure 51. TCP/IP APAR Required for RIP V2 Support

Product Name	APAR
TCP/IP V3R2	PQ02781

The TCP/IP APARs listed in Figure 52 are required for the Dynamic Internet Routing over Frame Relay function.

Figure 52. TCP/IP APARs Required for Dynamic Internet Routing Over Frame Relay

Product Name	APAR
TCP/IP V3R1 MVS	PN66582
TCP/IP V3R1 MVS	PN68188
TCP/IP V3R1 MVS	PN69619
TCP/IP V3R1 MVS	PN69951
TCP/IP V3R1 MVS	PN72929

The TCP/IP APARs listed in Figure 53 are required for compatibility with NCP.

Figure 53. TCP/IP APARs Required for Compatibility with NCP

Product Name	APAR
TCP/IP V2R2 VM	PN20654
TCP/IP V2R1 MVS	PN17950

The TCP/IP APARs listed in Figure 54 are required for Direct IP Channel Communication.

Figure 54. TCP/IP APARs Required for Direct IP Channel Communication

Product Name	APAR
TCP/IP V3R1 MVS	PN75734

The TCP/IP APAR listed in Figure 55 is required for compatibility with NCP Dynamic Internet Routing function.

Figure 55. TCP/IP APAR Required for NCP Dynamic Internet Routing Function

Product Name	APAR
TCP/IP V2R2.1 MVS	PN48473

The TCP/IP APAR listed in Figure 56 is required for IP NCPROUTE Direct over Channel function.

Figure 56. TCP/IP APAR Required for IP NCPROUTE Direct Over Channel

Product Name	APAR
TCP/IP V3R1 MVS	PN80904

#### 5.2.2.4 Toleration/Coexistence Requisites:

There are no toleration/coexistence requisites required.

### 5.2.2.5 Incompatibility (Negative) Requisites:

There are no incompatible products associated with this product.

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## 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 products share data sets:

- NCP V7R7
- EP R14
- NTO R11
- NRF R9
- NTuneMON V2R5

**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.

NCP, EP, NTO, NRF, and NTuneNCP share target and distribution libraries (data sets). If you install these products, you must allocate additional space for these data sets. Refer to the appropriate program directories for storage requirements for these products.

The storage requirements of this program must be added to the storage required by other programs having data in the same data set (library). An estimate of required space is the data set's current allocation plus the storage required by this program. Figure 60 on page 31 and Figure 61 on page 31 list the libraries (data sets) and the attributes required to install this program.

For more information on the names and sizes of the required data sets, please refer to 6.1.5, "Allocate SMP/E Target and Distribution Libraries" on page 34.

### 5.3.1 Storage Requirements for SMPCSI VSAM Cluster

Figure 57 provides the storage requirements for the SMPCSI VSAM cluster.

Figure 57. Storage Requirements for SMPCSI VSAM Cluster

DASD	Cylinders Required for SMPCSI DATA	Cylinders Required for SMPCSI INDEX
3380/3390	(16 3)	(3 3)

### 5.3.2 Storage Requirements for the SMP/E Work Data Sets

Figure 58 provides the SMP/E work data set space required for installation.

Figure 58. Storage Requirements for SMP/E Work Data Sets

Library DDNAME	T	D S O R E G	R E C F M	L E C L	No. of Blks	BLK SIZE	No. of 3380/ 9345 Trks	No. of 3390 Trks	No. of DIR Blks
SMPWRK1	S	PO	FB	80	2	8800	1	1	5
SMPWRK2	S	PO	FB	80	2	8800	1	1	5
SMPWRK3	S	PO	FB	80	2	3200	1	1	20
SMPWRK4	S	PO	FB	80	2	3200	1	1	5
SMPWRK6	S	PO	FB	80	9	8800	2	2	500
SYSUT1	S	PS	--	--	1575	--	225	175	0
SYSUT2	S	PS	--	--	1575	--	225	175	0
SYSUT3	S	PS	--	--	1575	--	225	175	0
SYSUT4	S	PS	--	--	1575	--	225	175	0

The following table provides an estimate of the storage needed in the SMP/E data sets for NCP V7R7 MVS. The estimates must be added to those of any other programs and service being installed to determine the total additional storage requirements.

Figure 59 (Page 1 of 2). Storage Requirements for SMP/E Data Sets

Library DDNAME	T	D S O R E G	R E C F M	L E C L	No. of Blks	BLK SIZE	No. of 3380/ 9345 Trks	No. of 3390 Trks	No. of DIR Blks
SMPHOLD	S	PS	FB	80	5	8800	1	2	0
SMPMTS	S	PO	FB	80	757	8800	152	152	512
SMPPTS	S	PO	FB	80	500	8800	100	101	250
SMPSCDS	S	PO	FB	80	157	8800	32	32	53
SMPSTS	S	PO	FB	80	150	8800	30	25	99



Figure 59 (Page 2 of 2). Storage Requirements for SMP/E Data Sets

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
SMPLOG	S	PS	VB	80	330	8800	66	55	0

The following figures list the target and distribution libraries (data sets) and their attributes required to install NCP V7R7 MVS. The storage requirements of NCP V7R7 MVS must be added to the storage required by other programs having data in the same data set (library).

Figure 60. Storage Requirements for NCP V7R7 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
SNCPMAC1	S	PO	FB	80	2550	8800	511	425	61
SNCPMOD1	S	PO	U	0	1755	6144	251	195	279

Figure 61. Storage Requirements for NCP V7R7 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
ANCPMAC1	S	PO	FB	80	2550	8800	511	425	61
ANCPMOD1	S	PO	U	0	1755	6144	251	195	279
ANCP SAMP	S	PO	FB	80	6	8800	2	1	1

### 5.3.3 Storage Requirements for NCP and NCP-Related Products

NCP, EP, NTO, NRF, and the NTuneNCP tuning feature of NTuneMON share target and distribution libraries (data sets). If you install more than one of these products, you must allocate additional space for these data sets. Figure 62 shows the data sets and the space used by each of the products. To obtain an estimate of the total space needed, add the values for the products you are installing. If you install any other routines into these data sets, you will need additional space for those routines.

Figure 62. Storage Requirements for NCP and NCP-Related Products

Data Set Name or Library Name	NCP V7R7		EP R14		NTO R11		NRF R9		NTuneMON V2R5	
	Blk	Dir. Blk	Blk	Dir. Blk	Blk	Dir. Blk	Blk	Dir. Blk	Blk	Dir. Blk
SNCPMAC1	2550	61	20	1	52	3	57	2	–	–
SNCPMOD1	1755	279	62	6	98	17	87	17	10	2
ANCPMAC1	2550	61	20	1	52	3	57	2	–	–
ANCPMOD1	1755	279	62	6	98	17	87	17	10	2
ANCP SAMP	6	1	2	2	3	1	2	1	–	–

## 5.4 FMIDs Deleted

Please see the SMPMCS file in Appendix A for the FMIDs deleted by NCP V7R7.

## 5.5 Special Considerations

NCP V7R7 MVS has no special considerations for the target system.

---

## 6.0 Installation Instructions

This section describes the installation method and the step-by-step procedures to install NCP V7R7 MVS.

---

### 6.1 Installing NCP V7R7 MVS

#### 6.1.1 SMP/E Considerations for Installing NCP V7R7 MVS

This release of NCP V7R7 MVS is installed using the SMP/E RECEIVE, APPLY, and ACCEPT commands. If you want to install NCP V7R7 MVS into its own SMP/E environment, several optional sample jobs have been provided to create and initialize the SMPCSI and the SMP/E control data sets. 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 NCP V7R7 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 63 provides a description of each character string.

*Figure 63. Character String Descriptions*

Character string	Description
xxxxxx	Volume ID of the library pack
ncpzxxxx	High-level qualifier for data sets
ncptgt	SMP/E target zone used for NCP
ncpdlib	SMP/E distribution zone used for NCP
smpe	DSPREFIX for SMPTLIBs
catalog name	Catalog for VSAM CSI data set
tape	Tape unit type

#### 6.1.3 SMP/E Options Subentry Values

The recommended values for some SMP/E CSI subentries are shown in Figure 64. Use of values lower than these may result in failures in the installation process. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. Refer to the SMP/E manuals for instructions on updating the global zone. Figure 64 provides the SMP/E subentry space parameters required for installation.

Figure 64. Storage Requirements for SMP/E Subentries

SUBENTRY	Value
DSSPACE	(500,100,500)
PEMAX	8756

## 6.1.4 Unload the Sample JCL from the Product Tape

Sample installation jobs are provided on the distribution tape to help you install NCP V7R7 MVS. The following sample JCL will copy the NCP V7R7 MVS jobs from the tape. See Figure 65 for the JCL to unload the sample JCL from the tape.

```
//SAMPLJCL JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
/**
/* UNLOAD THE SAMPLE JCL FROM TAPE
/**
//COPY EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=A
//TAPEIN DD DSN=IBM.HNC7702.F2,VOL=SER=NC7702,
// UNIT=tape,DISP=OLD,LABEL=(3,SL)
//DISKOUT DD DSN=IBM.HNC7702.INSTALL.JCL,VOL=SER=xxxxxx,
// SPACE=(CYL,(1,1,5)),DISP=(NEW,KEEP),
// UNIT=SYSDA
//SYSUT3 DD UNIT=SYSDA,SPACE=(80,(15,1))
//SYSIN DD *
COPY I=TAPEIN,0=DISKOUT
SELECT MEMBER=NCPINJCL
/**
```

Figure 65. JCL to Unload the Installation JCL

### Expected Return Codes and Messages:

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

You can also access the sample installation jobs after performing an SMP/E RECEIVE for FMID HNC7702, and then copying the jobs from dataset **hlq.IBM.HNC7702.F2** to a work dataset for editing and submission.

## 6.1.5 Allocate SMP/E Target and Distribution Libraries

Edit and submit sample job LIBRARY to allocate the SMP/E target and distribution libraries for NCP V7R7 MVS. Consult the instructions in the sample job for more information. See Figure 66 on page 35 for the JCL to allocate target and distribution libraries.

```

//LIBRARY JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
//**
//*****
//* THE DATA SET SIZES FOLLOWING ARE FOR NCP ONLY. NCP
//* SHARES THESE DATA SETS WITH EP, NTO, AND NRF.
//*
//* PLEASE REFER TO THE DASD STORAGE REQUIREMENTS SECTION
//* IN YOUR PROGRAM DIRECTORY FOR THE AMOUNT OF ADDITIONAL
//* STORAGE YOU WILL NEED TO ALLOCATE FOR EACH PRODUCT
//* YOU PLAN TO INSTALL INTO THESE SHARED DATA SETS.
//*
//* NOTE THAT ACTUAL DATA SET SIZES HAVE BEEN INCREASED
//* SLIGHTLY TO ALLOW FOR MAINTENANCE.
//*
//*****
//ALLOCATE EXEC PGM=IEFBR14
//SYSPRINT DD SYSOUT=A
//SNCPMAC1 DD DSN=ncpzxxxx.SNCPMAC1,VOL=SER=xxxxxx,
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=8800),
//            UNIT=SYSDA,SPACE=(8800,(3606,20,66)),
//            DISP=(NEW,CATLG)
//SNCPMOD1 DD DSN=ncpzxxxx.SNCPMOD1,VOL=SER=xxxxxx,
//            DCB=(RECFM=U,LRECL=0,BLKSIZE=6144),
//            UNIT=SYSDA,SPACE=(6144,(2000,20,300)),
//            DISP=(NEW,CATLG)
//ANCPMAC1 DD DSN=ncpzxxxx.ANCPMAC1,VOL=SER=xxxxxx,
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=8800),
//            UNIT=SYSDA,SPACE=(8800,(3606,20,66)),
//            DISP=(NEW,CATLG)
//ANCPMOD1 DD DSN=ncpzxxxx.ANCPMOD1,VOL=SER=xxxxxx,
//            DCB=(RECFM=U,LRECL=0,BLKSIZE=6144),
//            UNIT=SYSDA,SPACE=(6144,(2000,20,300)),
//            DISP=(NEW,CATLG)
//ANCPXSAMP DD DSN=ncpzxxxx.ANCPXSAMP,VOL=SER=xxxxxx,
//            DCB=(RECFM=FB,LRECL=80,BLKSIZE=8800),
//            UNIT=SYSDA,SPACE=(8800,(12,2,6)),
//            DISP=(NEW,CATLG)
//**

```

Figure 66. JCL to Allocate Target and Distribution libraries

### Expected Return Codes and Messages:

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

## 6.1.6 Allocate Non-VSAM SMP/E Data Sets (Optional)

If you choose to create a new SMP/E environment, the following is an example of a job to allocate the non-VSAM SMP/E data sets. Sample job NONVSAM allocates the non-VSAM SMP/E data sets for NCP V7R7 MVS. See Figure 67 on page 36 for the JCL to allocate the SMP/E non-VSAM data sets.

```

//NONVSAM JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
/**
/**      THIS JOB ALLOCATES ALL NECESSARY
/**      NON-VSAM SMP DATA SETS.
/**
//ALLOCATE EXEC PGM=IEFBR14
//SMPHOLD DD DSN=ncpzxxxx.SMPHOLD,VOL=SER=xxxxxxx,
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=8800,DSORG=PS),
//          UNIT=SYSDA,DISP=(NEW,CATLG),SPACE=(8800,(5))
//SMPMTS DD DSN=ncpzxxxx.SMPMTS,VOL=SER=xxxxxxx,
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=8800),
//          UNIT=SYSDA,SPACE=(8800,(757,30,512)),
//          DISP=(NEW,CATLG)
//SMPPTS DD DSN=ncpzxxxx.SMPPTS,VOL=SER=xxxxxxx,
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=8800),
//          UNIT=SYSDA,SPACE=(8800,(500,30,250)),
//          DISP=(NEW,CATLG)
//SMPSCDS DD DSN=ncpzxxxx.SMPSCDS,VOL=SER=xxxxxxx,
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=8800),
//          UNIT=SYSDA,SPACE=(8800,(157,10,53)),
//          DISP=(NEW,CATLG)
//SMPSTS DD DSN=ncpzxxxx.SMPSTS,VOL=SER=xxxxxxx,
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=8800),
//          UNIT=SYSDA,SPACE=(8800,(150,10,99)),
//          DISP=(NEW,CATLG)
//SMPLOG DD DSN=ncpzxxxx.SMPLOG,VOL=SER=xxxxxxx,
//          DCB=(LRECL=80,RECFM=VB,BLKSIZE=8800),
//          UNIT=SYSDA,SPACE=(8800,(330,30)),
//          DISP=(NEW,CATLG)
/**

```

Figure 67. JCL to Allocate Non-VSAM SMP/E Data Sets (Optional)

#### Expected Return Codes and Messages:

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

### 6.1.7 Allocate the VSAM CSI Data Sets (Optional)

If you choose to create a new SMP/E environment, the following is an example of a job to allocate the VSAM CSI data sets. Sample job CSIALLOC allocates the SMP/E Consolidated Software Inventory (CSI) data set for NCP V7R7 MVS. See Figure 68 on page 37 for the JCL to allocate the CSI data set.

```

//CSIALLOC JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
/**
/**  CREATE THE CONSOLIDATED SOFTWARE INVENTORY
/**  (CSI) DATA SETS FOR NCP.
/**
//ALLOCATE EXEC PGM=IDCAMS
//ZPOOL DD DSN=SYS1.MACLIB(GIMZPOOL),DISP=SHR
//SYSPRINT DD SYSOUT=A
//SYSIN DD *
  DEFINE CLUSTER(
    NAME(ncpzxxxx.GLOBAL.CSI)
    FREESPACE(10,5)
    KEYS(24 0)
    RECORDSIZE(24 143)
    SHAREOPTIONS(2,3)
    UNIQUE
    VOLUMES(xxxxxx)
  )
  DATA(
    NAME(ncpzxxxx.GLOBAL.DATA)
    CONTROLINTERVALSIZE(4096)
    CYLINDERS(1 1)
  )
  INDEX(
    NAME(ncpzxxxx.GLOBAL.INDEX)
    CYLINDERS(1 1)
    IMBED
  )
  CATALOG(catalog name)
  DEFINE CLUSTER(
    NAME(ncpzxxxx.TZONE.CSI)
    FREESPACE(10,5)
    KEYS(24 0)
    RECORDSIZE(24 143)
    SHAREOPTIONS(2,3)
    UNIQUE
    VOLUMES(xxxxxx)
  )
  DATA(
    NAME(ncpzxxxx.TZONE.DATA)
    CONTROLINTERVALSIZE(4096)
    CYLINDERS(10 1)
  )
  INDEX(
    NAME(ncpzxxxx.TZONE.INDEX)
    CYLINDERS(1 1)
    IMBED
  )
  CATALOG(catalog name)

```

Figure 68 (Part 1 of 2). JCL to Allocate CSI Data Set (Optional)

```

DEFINE CLUSTER(
    NAME(ncpzzzzz.DZONE.CSI)
    FREESPACE(10,5)
    KEYS(24 0)
    RECORDSIZE(24 143)
    SHAREOPTIONS(2,3)
    UNIQUE
    VOLUMES(xxxxxx)
)
DATA(
    NAME(ncpzzzzz.DZONE.DATA)
    CONTROLINTERVALSIZE(4096)
    CYLINDERS(5 1)
)
INDEX(
    NAME(ncpzzzzz.DZONE.INDEX)
    CYLINDERS(1 1)
    IMBED
)
CATALOG(catalog name)
/*
/*      INITIALIZE THE CSI DATASETS
/*
/*
REPRO OUTDATASET(ncpzzzzz.GLOBAL.CSI) INFILE(ZPOOL)
REPRO OUTDATASET(ncpzzzzz.TZONE.CSI) INFILE(ZPOOL)
REPRO OUTDATASET(ncpzzzzz.DZONE.CSI) INFILE(ZPOOL)
//*
```

Figure 68 (Part 2 of 2). JCL to Allocate CSI Data Set (Optional)

### Expected Return Codes and Messages:

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

## 6.1.8 Initialize the VSAM CSI Data Sets (Optional)

If you choose to create a new SMP/E environment, the following is an example of a job to initialize the VSAM CSI data sets. Sample job CSIOPTS initializes the VSAM CSI dataset for NCP V7R7 MVS. See Figure 69 on page 39 for the JCL to add necessary entries and utilities to SMP/E CSI data sets.



```

//CSIOPTS JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
/**
/** ADD THE NECESSARY ENTRIES AND UTILITIES TO THE
/** THE SMP/E CSI DATA SETS TO BE USED FOR NCP.
/**
//INIT EXEC PGM=GIMSMP,PARM='DATE=U',REGION=4096K,
// TIME=1440
//SMPCSI DD DSN=ncpzxxxz.GLOBAL.CSI,DISP=SHR
//SMPLOG DD DSN=ncpzxxxz.SMPLOG,DISP=SHR
//SMPPTS DD DSN=ncpzxxxz.SMPPTS,DISP=SHR
//SMPCNTL DD *
SET BDY(GLOBAL) /* --- SETTING CSI UTILITIES AND PARAMETERS
*****
* FOR INFO, SEE SMP/E REFERENCE "CSI GLOBALZONE OPTIONS *
* ENTRY" SEE ALSO "SYS1.SAMPLIB(GIMSAMPU)" *
*****/.
UCLIN .
ADD GLOBALZONE /* SETUP ZONE DEFN ENTRY - GLOBAL ZONE */
SREL(P004) /* SREL VALUE */
OPTIONS(OPTNCP) /* DEFAULT OPTIONS ENTRY FOR NCP */
ZONEINDEX( /* ZONE INDICES */
(ncptgt,ncpzxxxz.TZONE.CSI,TARGET) /* NCP TARGET ZONE */
(ncpdlib,ncpzxxxz.DZONE.CSI,DLIB) . /* NCP DLIB ZONE */
ADD OPTIONS(OPTNCP) /* - ADD AN OPTIONS ENTRY */
DSPREFIX(smpe) /* DSN PREFIX FOR SMPTLIB DATA SETS */
DSSPACE(500,100,500) /* SPACE ALLOC. SMPTLIB DATA SETS */
NUCID(1) /* MVS ONLY OPERAND */
PAGELEN(58) /* SETUP SMPDOUT PAGEDLENGTH */
PEMAX(8756) /* SET LARGE PEMAX VALUE */
NOPURGE /* RETAIN ALL SMP DATASETS */
RETRYDDN(ALL) . /* RETRY ALL COMPRESSES */
ADD UTILITY(IEWL) /* LINKAGE EDITOR UTILITY */
NAME(IEWL) /* PROGRAM NAME */
PARM(SIZE=(4096K,64K),LET,LIST,XREF,NCAL) . /* PARM */
ADD OPTIONS(OPTNCP)
LKED(IEWL).
ADD UTILITY(IEBCOPY) /* COMPRESS UTILITY ENTRY */
NAME(IEBCOPY) . /* PROGRAM NAME */
ADD OPTIONS(OPTNCP) /* CONNECT TO OPTIONS */
COMP(IEBCOPY) . /* COMPRESS INFO NOW HERE */
ENDUCL .

```

Figure 69 (Part 1 of 2). JCL to Add Necessary Entries and Utilities to SMP/E CSI Data Sets (Optional)

```

SET BDY(ncptgt) .           /* INITIALIZE TARGET ZONE */
UCLIN .
  ADD TARGETZONE(ncptgt)   /* SETUP ZONE DEFINITION ENTRY */
  SREL(P004)               /* SREL VALUE */
  RELATED(ncpdlib)         /* RELATED DLIB ZONE NAME */
  OPTIONS(OPTNCP) .       /* --- ADD AN OPTIONS ENTRY */
ENDUCL .
SET BDY(ncpdlib) .        /* INITIALIZE DLIB ZONE */
UCLIN .
  ADD DLIBZONE(ncpdlib)   /* SETUP ZONE DEFINITION ENTRY */
  SREL(P004)               /* SREL VALUE */
  RELATED(ncptgt)         /* RELATED TARGET ZONE NAME */
  OPTIONS(OPTNCP) .       /* --- ADD AN OPTIONS ENTRY */
ENDUCL .
SET BDY(GLOBAL) .        /* GO BACK TO GLOBAL ZONE */
LIST ALLZONES .          /* VERIFY CSI INITIALIZATION */
/**

```

Figure 69 (Part 2 of 2). JCL to Add Necessary Entries and Utilities to SMP/E CSI Data Sets (Optional)

#### Expected Return Codes and Messages:

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

### 6.1.9 Create DDDEF Entries

Edit and submit sample job DDDEF to create DDDEF entries for all of the SMP/E libraries for NCP V7R7 MVS. Note that the SMP/E control data sets are included in the sample DDDEF job. If you are using an existing SMP/E environment, all of the DDDEFs for SMP/E data sets will cause the job to end with a non-zero return code. See Figure 70 on page 41 for the JCL to create DDDEF entries.

```

//DDEFF  JOB  (account info),'pgmrs name',MSGLEVEL=(1,1)
//**
//*****
//*  ADD THE SMP  LIBRARY  DD NAMES TO THE GLOBAL ZONE  */
//*****
//GZONE  EXEC  PGM=GIMSMP,PARM='DATE=U',REGION=4096K,
//
//      TIME=1440
//SMPOUT  DD  SYSOUT=A
//SYSPRINT DD  SYSOUT=A
//SMPLOG  DD  DSN=ncpzxxxx.SMPLOG,DISP=SHR
//SMPPTS  DD  DSN=ncpzxxxx.SMPPTS,DISP=SHR
//SMPCSI  DD  DSN=ncpzxxxx.GLOBAL.CSI,DISP=SHR
//SMPCNTL DD  *
  SET BDY(GLOBAL) .
  UCLIN .
  ADD DDEFF(SMPOUT)  SYSOUT(A) .
  ADD DDEFF(SYSPRINT)  SYSOUT(A) .
  ADD DDEFF(SYSUT1)  UNIT(SYSDA) SPACE(15,5) CYL .
  ADD DDEFF(SYSUT2)  UNIT(SYSDA) SPACE(15,5) CYL .
  ADD DDEFF(SYSUT3)  UNIT(SYSDA) SPACE(15,5) CYL .
  ADD DDEFF(SYSUT4)  UNIT(SYSDA) SPACE(15,5) CYL .

  ADD DDEFF(SMPWRK1)  UNIT(SYSDA) SPACE(2,1) DIR(5) DELETE
  BLK(8800) .
  ADD DDEFF(SMPWRK2)  UNIT(SYSDA) SPACE(2,1) DIR(5) DELETE
  BLK(8800) .
  ADD DDEFF(SMPWRK3)  UNIT(SYSDA) SPACE(2,1) DIR(20) DELETE
  BLK(3200) .
  ADD DDEFF(SMPWRK4)  UNIT(SYSDA) SPACE(2,1) DIR(5) DELETE
  BLK(3200) .
  ADD DDEFF(SMPWRK6)  UNIT(SYSDA) SPACE(9,1) DIR(500) DELETE
  BLK(8800) .
  ADD DDEFF(SMPLOG)  DATASET(ncpzxxxx.SMPLOG)  VOLUME(xxxxxx)
  UNIT(SYSDA) MOD .
  ADD DDEFF(SMPHOLD)  DATASET(ncpzxxxx.SMPHOLD)  VOLUME(xxxxxx)
  UNIT(SYSDA) MOD .
  ADD DDEFF(SMPPTS)  DATASET(ncpzxxxx.SMPPTS)  VOLUME(xxxxxx)
  UNIT(SYSDA) SHR .
  ADD DDEFF(SMPPTS)  DATASET(ncpzxxxx.SMPPTS)  VOLUME(xxxxxx)
  UNIT(SYSDA) SHR .
  ADD DDEFF(SMPSCDS)  DATASET(ncpzxxxx.SMPSCDS)  VOLUME(xxxxxx)
  UNIT(SYSDA) SHR .
  ADD DDEFF(SMPSTS)  DATASET(ncpzxxxx.SMPSTS)  VOLUME(xxxxxx)
  UNIT(SYSDA) SHR .
ENDUCL .

```

Figure 70 (Part 1 of 4). JCL to Create DDDEF Entries

```

/**
/*****
/*  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(ANCPMAC1) DATASET(ncpzxxx.ANCPMAC1)
                        VOLUME(xxxxxx) UNIT(SYSDA) SHR .
  ADD DDDEF(ANCPMOD1) DATASET(ncpzxxx.ANCPMOD1)
                        VOLUME(xxxxxx) UNIT(SYSDA) SHR .
  ADD DDDEF(ANCPXSAMP) DATASET(ncpzxxx.ANCPXSAMP)
                        VOLUME(xxxxxx) UNIT(SYSDA) SHR .
  ADD DDDEF(SNCPMAC1) DATASET(ncpzxxx.SNCPMAC1)
                        VOLUME(xxxxxx) UNIT(SYSDA) SHR .
  ADD DDDEF(SMPOUT)   SYSOUT(A) .
  ADD DDDEF(SYSPRINT) SYSOUT(A) .
  ADD DDDEF(SYSUT1)   UNIT(SYSDA) SPACE(15,5) CYL .
  ADD DDDEF(SYSUT2)   UNIT(SYSDA) SPACE(15,5) CYL .
  ADD DDDEF(SYSUT3)   UNIT(SYSDA) SPACE(15,5) CYL .
  ADD DDDEF(SYSUT4)   UNIT(SYSDA) SPACE(15,5) CYL .

  ADD DDDEF(SMPWRK1)  UNIT(SYSDA) SPACE(2,1) DIR(5) DELETE
                        BLK(8800) .
  ADD DDDEF(SMPWRK2)  UNIT(SYSDA) SPACE(2,1) DIR(5) DELETE
                        BLK(8800) .
  ADD DDDEF(SMPWRK3)  UNIT(SYSDA) SPACE(2,1) DIR(20) DELETE
                        BLK(3200) .
  ADD DDDEF(SMPWRK4)  UNIT(SYSDA) SPACE(2,1) DIR(5) DELETE
                        BLK(3200) .

```

Figure 70 (Part 2 of 4). JCL to Create DDDEF Entries

```

ADD DDDEF(SMPWRK6) UNIT(SYSDA) SPACE(9,1) DIR(500) DELETE
    BLK(8800) .
ADD DDDEF(SMPLOG) DATASET(ncpzxxxx.SMPLOG) VOLUME(xxxxxx)
    UNIT(SYSDA) MOD .
ADD DDDEF(SMPHOLD) DATASET(ncpzxxxx.SMPHOLD) VOLUME(xxxxxx)
    UNIT(SYSDA) MOD .
ADD DDDEF(SMPMTS) DATASET(ncpzxxxx.SMPMTS) VOLUME(xxxxxx)
    UNIT(SYSDA) SHR .
ADD DDDEF(SMPPTS) DATASET(ncpzxxxx.SMPPTS) VOLUME(xxxxxx)
    UNIT(SYSDA) SHR .
ADD DDDEF(SMPSCDS) DATASET(ncpzxxxx.SMPSCDS) VOLUME(xxxxxx)
    UNIT(SYSDA) SHR .
ADD DDDEF(SMPSTS) DATASET(ncpzxxxx.SMPSTS) VOLUME(xxxxxx)
    UNIT(SYSDA) SHR .
ADD DDDEF(SYSLIB) CONCAT(SMPMTS,SNCPMAC1) .
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=ncpzxxxx.SMPLOG,DISP=SHR
//SMPPTS DD DSN=ncpzxxxx.SMPPTS,DISP=SHR
//SMPCSI DD DSN=ncpzxxxx.GLOBAL.CSI,DISP=SHR
//SMPCNTL DD *
SET BDY(ncptgt) .
UCLIN .
ADD DDDEF(ANCPMAC1) DATASET(ncpzxxxx.ANCPMAC1)
    VOLUME(xxxxxx) UNIT(SYSDA) SHR .
ADD DDDEF(ANCPMOD1) DATASET(ncpzxxxx.ANCPMOD1)
    VOLUME(xxxxxx) UNIT(SYSDA) SHR .
ADD DDDEF(ANCPXSAMP) DATASET(ncpzxxxx.ANCPXSAMP)
    VOLUME(xxxxxx) UNIT(SYSDA) SHR .
ADD DDDEF(SNCPMAC1) DATASET(ncpzxxxx.SNCPMAC1)
    VOLUME(xxxxxx) UNIT(SYSDA) SHR .

```

Figure 70 (Part 3 of 4). JCL to Create DDDEF Entries

```

ADD DDDEF(SNCPMOD1) DATASET(ncpzzzzz.SNCPMOD1)
                        VOLUME(xxxxxx) UNIT(SYSDA) SHR .
ADD DDDEF(SMPOUT)     SYSOUT(A) .
ADD DDDEF(SYSPRINT)  SYSOUT(A) .
ADD DDDEF(SYSUT1)    UNIT(SYSDA) SPACE(15,5) CYL .
ADD DDDEF(SYSUT2)    UNIT(SYSDA) SPACE(15,5) CYL .
ADD DDDEF(SYSUT3)    UNIT(SYSDA) SPACE(15,5) CYL .
ADD DDDEF(SYSUT4)    UNIT(SYSDA) SPACE(15,5) CYL .

ADD DDDEF(SMPWRK1)   UNIT(SYSDA) SPACE(2,1) DIR(5) DELETE
                        BLK(8800) .
ADD DDDEF(SMPWRK2)   UNIT(SYSDA) SPACE(2,1) DIR(5) DELETE
                        BLK(8800) .
ADD DDDEF(SMPWRK3)   UNIT(SYSDA) SPACE(2,1) DIR(20) DELETE
                        BLK(3200) .
ADD DDDEF(SMPWRK4)   UNIT(SYSDA) SPACE(2,1) DIR(5) DELETE
                        BLK(3200) .
ADD DDDEF(SMPWRK6)   UNIT(SYSDA) SPACE(9,1) DIR(500) DELETE
                        BLK(8800) .
ADD DDDEF(SMPLOG)    DATASET(ncpzzzzz.SMPLOG) VOLUME(xxxxxx)
                        UNIT(SYSDA) MOD .
ADD DDDEF(SMPHOLD)   DATASET(ncpzzzzz.SMPHOLD) VOLUME(xxxxxx)
                        UNIT(SYSDA) MOD .
ADD DDDEF(SMPMPTS)   DATASET(ncpzzzzz.SMPMPTS) VOLUME(xxxxxx)
                        UNIT(SYSDA) SHR .
ADD DDDEF(SMPPTS)    DATASET(ncpzzzzz.SMPPTS) VOLUME(xxxxxx)
                        UNIT(SYSDA) SHR .
ADD DDDEF(SMPSCDS)   DATASET(ncpzzzzz.SMPSCDS) VOLUME(xxxxxx)
                        UNIT(SYSDA) SHR .
ADD DDDEF(SMPSTS)    DATASET(ncpzzzzz.SMPSTS) VOLUME(xxxxxx)
                        UNIT(SYSDA) SHR .
ADD DDDEF(SYSLIB)    CONCAT(SMPMPTS,SNCPMAC1) .
ENDUCL .
//*
```

Figure 70 (Part 4 of 4). JCL to Create DDDEF Entries

### Expected Return Codes and Messages:

DDDEF job ends with return code equal zero (RC=0). If any of the DDDEF entries already exist, the DDDEF job will end with a return code of 8 (RC=8). Check the output to determine the cause of the non-zero return code.

## 6.1.10 Perform SMP/E RECEIVE

Edit and submit sample job NCPREC to perform the SMP/E RECEIVE for NCP V7R7 MVS. See Figure 71 on page 45 for the JCL to receive the data from the product tape.

```

//NCPREC 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=NC7702,
// LABEL=(,SL),DSN=SMPMCS
//SMPCNTL DD *
SET BDY(GLOBAL) .
RECEIVE SELECT(HNC7702) SYSMODS LIST .
/**

```

Figure 71. JCL to Perform SMP/E RECEIVE

**Note:** If you obtained NCP V7R7 MVS as part of a CBPDO, you can use the RCVPDO job found in the CBPDO RIMLIB data set to RECEIVE the NCP V7R7 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:

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

### 6.1.11 Perform SMP/E APPLY CHECK

Edit and submit sample job NCPAPCK to perform an SMP/E APPLY CHECK for NCP V7R7 MVS. See Figure 72 for the JCL to perform SMP/E APPLY CHECK.

```

//NCPAPCK 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(HNC7702) CHECK .
/**

```

Figure 72. JCL to Perform SMP/E APPLY CHECK

### Expected Return Codes and Messages:

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

## 6.1.12 Perform SMP/E APPLY

Edit and submit sample job NCPAPP to perform an SMP/E APPLY for NCP V7R7 MVS. See Figure 73 for the JCL to perform SMP/E APPLY.

```
//NCPAPP 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(HNC7702) .
/**
```

Figure 73. JCL to Perform SMP/E APPLY

### Expected Return Codes and Messages:

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

## 6.1.13 Perform SMP/E ACCEPT CHECK

Edit and submit sample job NCPACCK to perform an SMP/E ACCEPT CHECK for NCP V7R7 MVS. See Figure 74 for the JCL to perform ACCEPT CHECK.

```
//NCPACCK 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(HNC7702) CHECK .
/**
```

Figure 74. JCL to Perform SMP/E ACCEPT CHECK

### Expected Return Codes and Messages:



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

### 6.1.14 Perform SMP/E ACCEPT

Edit and submit sample job NCPACC to perform an SMP/E ACCEPT for NCP V7R7 MVS. See Figure 75 for the JCL to update the distribution library.

```
//NCPACC 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(HNC7702) .
//*
```

Figure 75. JCL to Perform SMP/E ACCEPT

#### Expected Return Codes and Messages:

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

### 6.1.15 Rejecting SMPTLIBs (Optional)

If you kept the NOPURGE option in the sample CSIOPTS JCL (shown in Figure 69 on page 39), you can reject the SMPTLIBs using the JCL shown in Figure 76 on page 48.

```

//NCPREJ 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 NCP V7R7 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 HNC7702. **
//*****
// 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(HNC7702)
BYPASS(APPLYCHECK,ACCEPTCHECK) .
//*

```

Figure 76. JCL to Reject SMP/E Entries and SMPTLIB (Optional)

### Expected Return Codes and Messages:

NCPREJ 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*.

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.

---

## 6.3 Post-Installation Considerations

This section contains post-installation considerations for an NCP-only system, a PEP system, and an EP Standalone system.

### 6.3.1 For an NCP-Only System

If you are installing an NCP-only system and have not already installed the SSP product, refer to the SSP program directory for product information and installation instructions. If you have already installed SSP, you have completed installation for an NCP-only system, and you are ready to generate NCP.

### 6.3.2 For a PEP (NCP and EP) System

If you are installing a PEP system and have not already installed the SSP or EP product, refer to the appropriate program directory for product information and installation instructions. You should install these products before generating NCP. If you have already installed both the SSP and EP products, you have completed installation of a PEP system, and you are ready to generate NCP and PEP.

### 6.3.3 For an EP Standalone System

If you are installing an EP standalone environment you must install NCP and EP. After NCP is installed, refer to the EP program directory for EP product information and installation instructions. If you have not installed SSP, refer to the SSP program directory for product information and installation instructions. If you have installed NCP, EP, and SSP, you have completed installation for an EP standalone system and you are ready to generate EP.



---

## Appendix A. Install Logic

---

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

The SMP/E Modification Control Statements (SMPMCS) for NCP V7R7 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 77 provides a portion of the SMP/E installation logic for NCP V7R7 MVS.

```
++FUNCTION(HNC7702) FESN(0566620) REWORK(1998210)
RFDSNPFX(IBM)          /* TIME=09.30.57  DATE=07/29/98 */
FILES(3)
/*****
/* COPYRIGHT = LICENSED MATERIALS - PROPERTY OF IBM */
/* THIS PRODUCT CONTAINS "RESTRICTED MATERIALS OF IBM"*/
/* 5648-063 (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(ENC0100,ENC1200,ENC1201,ENC1300,HNC2100,HNC2103,HNC2105,
HNC3103,HNC3106,HNC3107,HNC4103,HNC4105,HNC4203,HNC4205,HSS4105,
JSS4106,HNC5102,HNC4255,HNC5104,HNC4300,HNC5202,HNC5212,HNC4310,
HNC5302,HNC5312,HNC5402,HNC6102,HNC6202,HNC6302,HNC7102,HNC7202,
HNC7303,HNC7402,HNC7502,HNC7602)
.
++JCLIN                RELFILE(1) .
```

Figure 77. Installation Logic

You can browse these members using TSO/E or ISPF, or Figure 78 on page 52 provides a sample job to print the SMPMCS.

```
//NCPLOGIC JOB (account info),'pgmrs name',MSGLEVEL=(1,1)
/**
/* PRINT THE SMPMCS FILE FROM THE PRODUCT TAPE
/**
//GENER EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=A
//SYSUT1 DD UNIT=tape,DISP=OLD,VOL=SER=NC7702,
// LABEL=(1,SL),DSN=SMPMCS
//SYSUT2 DD SYSOUT=A
//SYSIN DD DUMMY
/*
```

*Figure 78. Job to Print the SMP/E Modification Control Statements*

**Expected Return Codes and Messages:**

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

---

## Appendix B. APARs Incorporated into this Program

The following NCP V7R6 APARs are incorporated into this program:

IR36479	IR36578	IR36482	IR37517
IR36484	IR36647	IR36483	IR37623
IR36543	IR36695	IR36969	IR37644
IR36544	IR36715	IR37280	IR37637
IR36557	IR36717	IR37893	IR37762
IR36442	IR36485	IR37879	IR37820
IR36472	IR36486	IR37903	IR37092
IR36726	IR36487	IR37990	IR36996
IR36785	IR36488	IR37998	IR37108
IR36851	IR36493	IR38035	IR37176
IR36884	IR36494	IR38068	IR37202
IR36886	IR36495	IR38072	IR37209
IR36889	IR36506	IR38071	IR37226
IR36907	IR36515	IR37297	IR37255
IR36956	IR36480	IR37271	IR37121
IR37026	IR36481	IR37390	IR38219
IR37055			IR38246





# Reader's Comments

## Program Directory for Network Control Program Version 7 Release 7 for MVS

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

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