Program Directory for
Advanced Communications Function (ACF)
System Support Programs (SSP)

Version 4 Release 8, Modification Level 1

Program Number 5655-041

FMID HSP4481

for Use with
MVS/ESA
OS/390
z/OS

Document Date: JULY 2001

GI10-6618-00

Note!

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

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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 or use S/390 SoftwareXcel to obtain the current "PSP Bucket".

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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 System Support Programs. This publication refers to System Support Programs as SSP V4R8.1 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 4 identifies the basic and optional program materials and documentation for SSP V4R8.1 MVS.
- 3.0, “Program Support” on page 9 describes the IBM support available for SSP V4R8.1 MVS.
- 4.0, “Program and Service Level Information” on page 10 lists the APARs (program level) and PTFs (service level) incorporated into SSP V4R8.1 MVS.
- 5.0, “Installation Requirements and Considerations” on page 11 identifies the resources and considerations for installing and using SSP V4R8.1 MVS.
- 6.0, “Installation Instructions” on page 26 provides detailed installation instructions for SSP V4R8.1 MVS. It also describes the procedures for activating the functions of SSP V4R8.1 MVS, or refers to appropriate publications.

Before installing SSP V4R8.1 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.

Do not use this program directory if you are installing SSP V4R8.1 MVS with a 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 SSP V4R8.1 MVS using the MVS Custom-Built Product Delivery Offering (CBPDO, 5751-CS3), a softcopy program directory is provided on the CBPDO tape which is identical to the printed copy shipped with your order. Your CBPDO contains a softcopy preventive service planning (PSP) upgrade for this product. All service and HOLDDATA for SSP V4R8.1 MVS are included on the CBPDO tape.

Starting with ACF/NCP V7R7, important changes have been made to the NCP generation assembler support. Beginning with ACF/SSP V4R7, the Network Definition Facility (NDF) will offer exclusive support for the High Level Assembler (HLAS) program product, 5696-234. Prior to ACF/SSP V4R7, two different assemblers were shipped with ACF/SSP. Support for the IFZ assembler (VSE) and IHR90 assembler (MVS and VM) will be discontinued starting with ACF/NCP V7R7. You will now be required to use the High Level Assembler for generating NCP V7R7 and later load modules.

If the High Level Assembler does not come installed on your system, you will need to order it.

Figure 1 shows the operating systems and indicates whether the High Level Assembler is integrated.

Figure 1. High Level Assembler Integrated with Operating System

Operating System	**High Level Assembler V1R2**	**High Level Assembler V1R3**
MVS/ESA V5R1 and later (5655-068, 5655-069)	Order separately	Order separately
OS/390 R1, R2, R3 (5645-001)	Integrated	Order separately
OS/390 V2R4, V2R5, V2R6 (5647-A01)	Integrated	Order separately
OS/390 V2R7, V2R8 (5647-A01)	n/a	Integrated
VM/ESA V2R2, V2R3 (5654-030)	Order separately	Order separately
VM/ESA V2R4 (5654-030)	n/a	Order separately
VSE/ESA V1R4.3, V1R4.4 (5750-ACD)	Order separately	Order separately
VSE/ESA V2R2, V2R3 (5690-VSE)	Integrated	Order separately
VSE/ESA V2R4 (5690-VSE)	n/a	Integrated

In addition to the High Level Assembler requirements, the APARs listed in Figure 44 on page 24 are required.

The IFZ and IHR90 assemblers will still be shipped with SSP V4R8.1 MVS for use with levels of ACF/NCP prior to NCP V7R7.

IBM recommends that you use an OS/390 ServerPac to install this level of SSP. 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.

Before installing the SSP Hardware Configuration Definition (HCD) members, see Section 5.4, “Special Considerations” on page 16.

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 V7R8, SSP V4R8, and EP Release 14 Library Directory* , SC30-4025. This directory gives you an overview of NCP, SSP, and EP and directs you to a variety of tasks related to these programs.

1.1 SSP V4R8.1 MVS Description

ACF/SSP Version 4 provides the following functions:

- Allows generation of ACF/Network Control Program (ACF/NCP), its partitioned emulation programming (PEP) extension, and the Emulation Program (EP). Refer to the programming requirements section for a list of supported NCP and EP levels.
- Loads the IBM 3720, 3725, or 3745 Communication Controller with a specified load module.
- Dumps the storage and register contents (in formatted or unformatted mode) of the IBM 3720, 3725, or 3745 Communication Controller.
- Formats the maintenance operator subsystem (MOSS) and communication scanner processor (CSP) dump data sets of the IBM 3720, 3725, or 3745
- Allows the EP user to: (1) obtain a dynamic dump of EP line trace table entries; (2) activate or deactivate the EP line trace function; (3) obtain a dump of the IBM 3720, 3725, or 3745 storage; (4) format MOSS and CSP dump data sets; or (5) display portions of storage at the system console.
- Assembles programs written in the communication controller assembler language.
- Provides a configuration report, that can be tailored by the user to provide meaningful and representative information on the resources and resource attributes of the user's network.
- Utilizes the ACF/Trace Analysis Program (ACF/TAP) to provide a common trace facility for use with the appropriate release of ACF/VTAM and ACF/NCP for the IBM 3720, 3725, 3745, or 3746 model 950 for SDLC, BSC, SS, X.25 NPSI, Token-Ring, frame-relay, or ISDN lines.
- Provides command lists (CLIST) to display selected NCP dump information online without formatting or printing the dump.

1.2 SSP V4R8.1 MVS FMIDs

SSP V4R8.1 MVS consists of the following FMID:

HSP4481

2.0 Program Materials

An IBM program is identified by a program number and a feature number. The program number for SSP V4R8.1 MVS is 5655-041.

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 SSP V4R8.1 MVS. Ask your IBM representative for this information if you have not already received a copy.

2.1 Basic Machine-Readable Material

The distribution medium for this program is 9-track magnetic tape (written at 6250 BPI), 3480 cartridge, or 4mm 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 6.0, “Installation Instructions” on page 26 for more information about how to install the program.

Figure 2 describes the tape or cartridge.

Figure 2. Basic Material: Program Tape

Medium	Feature Number	Physical Volume	External Label Identification	VOLSER
6250 tape	5801	1	MVSOBJ HSP4481	SP4481
3480 cart.	5802	1	MVSOBJ HSP4481	SP4481
4 mm cart.	5700	1	MVSOBJ HSP4481	SP4481

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for SSP V4R8.1 MVS.

2.3 Program Publications

The following sections identify the basic and optional publications for SSP V4R8.1 MVS.

2.3.1 Basic Program Publications

Figure 3 on page 5 identifies the basic unlicensed program publications for SSP V4R8.1 MVS. One copy of each of these publications is included when you order the basic materials for SSP V4R8.1 MVS. For additional copies, contact your IBM representative.

An asterisk (*) beside the Form Number indicates it contains “Restricted Materials of IBM.”

Figure 3. Basic Material: Unlicensed Publications

Publication Title	Form Number
Network Control Program, System Support Programs, and Emulation Program Generation and Loading Guide	SC31-6221
Network Control Program, System Support Programs, and Emulation Program Messages and Codes	SC31-6222
Licensed Program Specifications: System Support Programs Version 4 for OS/390 and MVS	GC31-6229
Network Control Program Version 7 Release 8, System Support Programs Version 4 Release 8, and Emulation Program Release 14 Library Directory	SC30-4025
NCP and 3745/46 Today Summer 01	G325-3426

Figure 4 identifies the basic licensed program publications for SSP V4R8.1 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 4. Basic Material: Licensed Publications

Publication Title	Form Number	Feature Number
Network Control Program, System Support Programs, and Emulation Program Diagnosis Guide	LY43-0033*	8010
Network Control Program, System Support Programs, and Emulation Program Trace Analysis Handbook	LY43-0037*	8140

2.3.2 Optional Program Publications

An asterisk (*) beside the Form Number indicates it contains “Restricted Materials of IBM.”

Figure 5 identifies the optional licensed program publications for SSP V4R8.1 MVS. The first copy is available at no charge to licensees of the optional 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 Publications

Publication Title	Form Number	Feature Number
Network Control Program and System Support Programs Customization Guide	LY43-0031*	7011-8011
Network Control Program and System Support Programs Customization Reference	LY43-0032*	7012-8012
ACF/NCP, ACF/SSP, EP, NPSI, and NTuneMON Softcopy Collection Kit (CD-ROM)	LK2T-0414*	7110-8110
Note: Order the collection kit, LK2T-0414, under the NCP product. (It is not orderable under SSP.)		

2.3.2.1 NCP Publications

Figure 6 lists publications that may be helpful when you use SSP V4R8.1 MVS. To order copies, contact your IBM representative. A fee is charged for these publications.

Figure 6. NCP Publications Associated with SSP V4R8.1 MVS

Publication Title	Form Number
Network Control Program Version 7 Release 8 Migration Guide	SC30-4024
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

2.3.2.2 HCD Publications

Figure 7 lists publications that may be helpful when you use the Hardware Configuration Definition function. To order copies, contact your IBM representative.

Figure 7. HCD Publications

Publication Title	Form Number
MVS/ESA Hardware Configuration Definition Using the Dialog	GC33-6457
MVS/ESA System Programming Library: Processor and Device Support	GC28-1617
OS/390 Hardware Configuration Definition Planning	GC28-1750
OS/390 HCD User's Guide	SC28-1848

2.3.2.3 Publications Useful for SSP CLISTs

Figure 8 lists publications that may be helpful when you use SSP CLISTs for NCP dumps. To order copies, contact your IBM representative.

Figure 8. SSP CLISTs for NCP Dumps Publications

Publication Title	Form Number
MVS/ESA IPCS User's Guide	GC28-1631
MVS/ESA IPCS Command Reference	GC28-1632
OS/390 ISPF Planning and Customization	SC28-1298
OS/390 TSO/E General Information	GC28-1964
TSO Extensions Version 2	SC28-1876
ISPF General Information	GC34-4250
ISPF Dialog Management Guide and Reference	SC34-4266
ISPF Dialog Management Examples	SC34-4313

2.4 Program Source Materials

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 9 on page 8 may be useful during the installation of SSP V4R8.1 MVS. To order copies, contact your IBM representative.

Figure 9. Publications Useful During Installation

Publication Title	Form Number
OS/390 SMP/E User's Guide	SC28-1740
OS/390 SMP/E Commands	SC28-1805
OS/390 SMP/E Reference	SC28-1806
OS/390 SMP/E Messages and Codes	SC28-1738
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

3.0 Program Support

This section describes the IBM support available for SSP V4R8.1 MVS.

3.1 Program Services

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

3.2 Preventive Service Planning

Before installing SSP V4R8.1 MVS, you should review the current Preventive Service Planning (PSP) information. If you obtained SSP V4R8.1 MVS as part of a CBPDO, there is HOLDDATA and PSP information included on the CBPDO tape.

If you obtained SSP V4R8.1 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 SSP V4R8.1 MVS are:

Figure 10. PSP Upgrade and Subset ID

UPGRADE	SUBSET	Description
SSP481	HSP4481	SSP V4R8.1 MVS

3.3 Statement of Support Procedures

Report any difficulties you have using this program to your IBM Support Center. If an APAR is required, the Support Center will provide the address to which any needed documentation can be sent.

Figure 11 identifies the component IDs (COMPID) for SSP V4R8.1 MVS.

Figure 11. Component IDs

FMID	COMPID	Component Name	RETAIN Release
HSP4481	565504100	ACF/SSP V4R8.1 MVS	481

4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of SSP V4R8.1 MVS. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs integrated.

4.1 Program Level Information

The following APAR fixes against previous releases of SSP have been incorporated into this release. They are listed by FMID.

- FMID HSP4480

IR40359	IR42373	IR43342
IR40970	IR42457	IR43377
IR41397	IR42459	IR43561
IR41496	IR42537	IR43506
IR41513	IR42617	IR43636
IR41516	IR42660	IR43713
IR41614	IR42661	IR43754
IR41797	IR42714	IR43881
IR41803	IR42854	IR44049
IR41809	IR42984	IR44503
IR41931	IR43036	IR44585
IR42001	IR43126	IR44889
IR42057	IR43190	IR45099
IR42315	IR43203	IR45232
IR42337	IR43251	IR45515
IR42372	IR43323	

4.2 Service Level Information

No PTFs against this release of SSP V4R8.1 MVS have been incorporated into the product tape.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating SSP V4R8.1 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. However, you may want to set up a clone of your system to use as a target system by making a separate IPL-able copy of the running system. The clone should include copies of all system libraries that SMP/E updates, copies of the SMP/E CSI data sets that describe the system libraries, and your PARMLIB and PROCLIB.

Some cases where two systems should be used include the following:

- When installing a new level of a product that is already installed, the new product will delete the old one. By installing onto a separate target system, you can test the new product while still keeping the old one in production.
- When installing a product that shares libraries or load modules with other products, the installation can disrupt the other products. Installing onto a test system or clone will allow you to assess these impacts without disrupting your production system.

5.1 Driving System Requirements

This section describes the environment of the driving system required to install SSP V4R8.1 MVS.

5.1.1 Machine Requirements

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

5.1.2 Programming Requirements

Figure 12 (Page 1 of 2). Driving System Software Requirements

Program Number	Product Name and Minimum VRM/Service Level
Any **one** of the following:	
5668-949	System Modification Program/Extended (SMP/E) Release 1.8.1 with PTF UR51070
5645-001	OS/390 SMP/E Version 1 Release 2 with PTF UR51071
5645-001	OS/390 SMP/E Version 1 Release 3 with PTF UR51067
5647-A01	OS/390 SMP/E Version 2 Release 4 with PTF UR51067

Figure 12 (Page 2 of 2). Driving System Software Requirements	
Program Number	**Product Name and Minimum VRM/Service Level**
5647-A01	OS/390 SMP/E Version 2 Release 5 or 6 with PTF UR51068
5647-A01	OS/390 SMP/E Version 2 Release 7 or higher

5.2 Target System Requirements

This section describes the environment of the target system required to install and use SSP V4R8.1 MVS.

SSP V4R8.1 MVS installs in the NCP (P004) SREL.

5.2.1 Machine Requirements

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

5.2.2 Programming Requirements

5.2.2.1 Mandatory Requisites

A mandatory requisite is defined as a product that is required without exception; this product either **will not install** or **will not function** unless this requisite is met. This includes products that are specified as REQs or PREs.

Figure 13 (Page 1 of 2). Mandatory Requisites	
Program Number	**Product Name and Minimum VRM/Service Level**
5696-234	High Level Assembler 1.2 or higher
Any **one** of the following:	
5655-068	MVS/ESA V5R2
5655-069	MVS/ESA V5R2.1 or higher
5647-A01	OS/390 V2R4 or higher
5645-001	OS/390 R1, R2, R3 or higher
5694-A01	z/OS V1R1 or higher
Any **one** of the following:	
5648-063	NCP V7R1 or higher
5668-231	NCP V6R2 or higher
5668-738	NCP V5R4

Figure 13 (Page 2 of 2). Mandatory Requisites

Program Number	Product Name and Minimum VRM/Service Level
5668-854	NCP V4R3.1

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 basic function of the product, but **is** needed at run time for a specific function of this product to work. This includes products that are specified as IF REQs.

Figure 14. Functional Requisites: SSP CLISTS for NCP Dumps

Program Number	Product Name and Minimum VRM/Service Level	Function
5655-042	Interactive System Productivity Facility (ISPF) V4R2 MVS/ESA or higher	ISPF

Figure 15. Functional Requisites: IFWNET CLISTS

Program Number	Product Name and Minimum VRM/Service Level	Function
5685-025	Time Sharing Options Extension (TSO/E) V2R5 or higher	TSO/E
Any **one** of the following:		
5697-B82	TME 10 NetView for OS/390 R1 with REXX support or higher	Netview
5655-007	NetView V3R1 with REXX support	Netview
5685-111	NetView V2R4 with REXX support	Netview

Figure 16. Functional Requisites: Emulation Program

Program Number	Product Name and Minimum VRM/Service Level	Function
Any **one or more** of the following:		
5735-XXB	Emulation Program R14	Emulation Program
5735-XXB	Emulation Program R12	Emulation Program
5735-XXB	Emulation Program R11	Emulation Program
5735-XXB	Emulation Program R9	Emulation Program
5735-XXB	Emulation Program R6.1	Emulation Program

5.2.2.3 Toleration/Coexistence Requisites

A toleration/coexistence requisite is defined as a product which must be present on a sharing system. These systems can be other systems in a multisystem environment (not necessarily sysplex), a shared DASD environment (such as test and production), or systems that reuse the same DASD at different time intervals.

SSP V4R8.1 MVS has no toleration/coexistence requisites.

5.2.2.4 Incompatibility (Negative) Requisites

A negative requisite identifies products which must *not* be installed on the same system as this product.

SSP V4R8.1 MVS has no negative requisites.

5.2.3 DASD Storage Requirements

SSP V4R8.1 MVS libraries can reside on 3390 DASD.

Figure 17 lists the total space required for each type of library.

Figure 17. Total DASD Space Required by SSP V4R8.1 MVS

Library Type	Total Space Required
Target	250 tracks of 3390
Distribution	535 tracks of 3390

Notes:

1. IBM recommends use of system determined block sizes for efficient DASD utilization for all non-RECFM U data sets. For RECFM U data sets, IBM recommends a block size of 32760, which is the most efficient from a performance and DASD utilization perspective.
2. Abbreviations used for the data set type are:

   U Unique data set, allocated by this product and used only by this product. 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, allocated by this product and used by this product and others. 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.

E Existing shared data set, used by this product and others. This data set is NOT allocated by this product. 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). This existing data set 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 names and sizes of the required data sets, please refer to 6.1.5, “Allocate SMP/E Target and Distribution Libraries and Paths” on page 28.

3. Abbreviations used for the HFS Path type are:

   N New path, created by this product.
   P Previously existing path, created by another product.

4. All target and distribution libraries listed have the following attributes:

   - The default name of the data set may not be changed
   - The default block size of the data set may be changed
   - The data set may not be merged with another data set that has equivalent characteristics
   - The data set should be PDS

5. All target libraries listed have the following attributes:

   - The data set may be SMS managed
   - It is not required for the data set to be SMS managed
   - It is not required for the data set to reside on the IPL volume
   - The values in the "Member Type" column are not necessarily the actual SMP/E element types identified in the SMPMCS.

6. All target libraries listed which contain load modules have the following attributes:

   - The data set may not be in the LPA
   - The data set may not be in the LNKLST
   - It is required for the data set to be APF authorized

The following figures describe the target and distribution libraries required to install SSP V4R8.1 MVS. The storage requirements of SSP V4R8.1 MVS must be added to the storage required by other programs having data in the same library or path.

Note: The data in these tables should be used when determining which libraries can be merged into common data sets. In addition, since some ALIAS names may not be unique, ensure that no naming conflicts will be introduced before merging libraries.

Figure 18. Storage Requirements for SSP V4R8.1 MVS Target Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SSPLIB	LMOD	ANY	U	PDS	U	0	190	9
SSPCLS1	CLIST	ANY	U	PDS	FB	80	51	7
NUCLEUS	LMOD	ANY	E	PDS	U	0	2	1
LINKLIB	LMOD	ANY	E	PDS	U	0	6	5

Figure 19. Storage Requirements for SSP V4R8.1 MVS Distribution Libraries

Library DDNAME	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
ASSPMAC1	U	PDS	FB	80	6	1
ASAMPNET	U	PDS	FB	80	16	1
ASSPSAMP	U	PDS	FB	80	5	2
SSPOBJ	U	PDS	U	0	450	411
ASSPCLS1	U	PDS	FB	80	51	7
ASSPSRC1	U	PDS	FB	80	5	1

5.3 FMIDs Deleted

Installing SSP V4R8.1 MVS may result in the deletion of other FMIDs. To see what FMIDs will be deleted, examine the ++VER statement in the product's SMPMCS.

If you do not wish to delete these FMIDs at this time, you must install SSP V4R8.1 MVS into separate SMP/E target and distribution zones.

Note: These FMIDs will not automatically be deleted from the Global Zone. Consult the SMP/E manuals for instructions on how to do this.

5.4 Special Considerations

5.4.1 Special Considerations for the HCD Facility

This program includes support for the MVS HCD facility. This support dynamically defines the NCP IBM 37xx channel connection to the MVS host. MVS/ESA V5R1, or later, is required for this support.

The installation procedure includes JCL to install the SSP members for HCD. These members are installed into SYS1.NUCLEUS and SYS1.LINKLIB, where HCD expects to find them in order to support a device type of "NCP." If you do not require SSP HCD support, you can install these members into alternate target libraries (where the members can be maintained and, optionally, integrated into your system in the future).

5.4.2 Special Considerations for VTAM V4R2 (5665-289) or Later

SSP V3R8, or later, is required to format buffer traces from VTAM V4R2 or later.

ACF/TAP formats new generalized trace facility (GTF) trace records for Systems Network Architecture (SNA) over TCP/IP that use the ANYNET/MVS feature of VTAM V3R4.2 or VTAM V4R2 or later.

5.4.3 System considerations for NCP, NPSI, DFSMS, VSE, and OS/390 TSO/E

The following sections contains compatibility requisites for NCP, NPSI, DFSMS, VSE, and OS/390 TSO/E.

5.4.3.1 Compatibility Requisites for NCP

The NCP APARs listed in Figure 20 are required to generate the NCP product with the SSP NDF.

Figure 20. NCP APARs Required to Generate NCP with SSP NDF

Product Name	APAR
NCP V4R3.1	IR82746 IR83237 IR83303 IR83307 IR83826 IR83952 IR86790 IR89297

The NCP APAR listed in Figure 21 is required if you want to code a default TCP/IP route in NCP V7R1.

Figure 21. NCP APAR Required to Code a Default TCP/IP Route in NCP V7R1	
Product Name	**APAR**
NCP V7R1	IR26000

The NCP APAR listed in Figure 22 is required if you want to code RNRLIMT on a NTRI logical GROUP definition statement in NCP V5R4.

Figure 22. NCP APAR Required to Code RNRLIMT	
Product Name	**APAR**
NCP V5R4	IR99583

The NCP APARs listed in Figure 23 are required if your generation definition contains frame-relay boundary access node (BAN) connections.

Figure 23. NCP APARs Required to Code BAN Connections	
Product Name	**APAR**
NCP V7R1	IR28397
NCP V7R2	IR28239

The NCP APARs shown in Figure 24 are required if you want to use the ADDIFG keyword to increase the inter-frame gap for IBM 3746 Model 900 frame-relay, SDLC, or X.25 physical lines.

Figure 24. NCP APARs Required to Use ADDIFG Keyword

Product Name	APAR
NCP V6R3	IR27091
NCP V7R1	IR27090

The NCP APARs listed in Figure 25 are required if you want NCP to initiate the deactivation of an out-of-sequence virtual route (VR).

Figure 25. NCP APARs Required to Initiate Deactivation of an Out-of-Sequence Virtual Route

Product Name	APAR
NCP V7R1	IR35146
NCP V7R2	IR35146
NCP V7R3	IR35146
NCP V7R4	IR35146
NCP V7R5	IR35146

The NCP APAR listed in Figure 26 is required if you want to use duplicate TIC configuration for subarea connections.

Figure 26. NCP APAR Required to Use Duplicate TIC Configuration for Subarea Connections

Product Name	APAR
NCP V7R5	IR35842

The NCP APAR listed in Figure 27 is required if you generate backup channel connections for the NCP-NCPROUTE IP interface.

Figure 27. NCP APAR Required to Generate Backup Channel Connections for NCP-NCPROUTE IP Interface

Product Name	APAR
NCP V7R5	IR33961

The NCP APAR listed in Figure 28 is required if you generate INN connections using LIC16 ISDN to ISDN TA.

Figure 28. NCP APAR Required to Generate INN Connections

Product Name	APAR
NCP V7R5	IR34013

The NCP APAR listed in Figure 29 is required if you code MAXDLCI for an ISDN physical line (D-Channel).

Figure 29. NCP APAR Required to Code MAXDLCI for D-Channel

Product Name	APAR
NCP V7R5	IR33979

The NCP APARs listed in Figure 30 are required if you code USGTIER=1, 2, 2.5, or 3 and have only channel links defined, and you wish to take advantage of the higher limits regarding the number of channel links that can be defined.

Figure 30. NCP APARs Required if you code USGTIER=1, 2, 2.5, or 3

Product Name	APAR
NCP V7R1	IR34014
NCP V7R2	IR34014
NCP V7R3	IR34014
NCP V7R4	IR34014
NCP V7R5	IR34014

The NCP APAR listed in Figure 31 is required if you code QSZALERT on the BUILD statement to determine if a session or station is using an inordinate number of buffers.

Figure 31. NCP APAR Required to Include QSZALERT Function in NCP V7R5.

Product Name	APAR
NCP V7R5	IR36167

The NCP APARs listed in Figure 32 are required if you want to use CIR (Committed Information Rate) for bandwidth management of the 3746 Model 900 frame-relay lines.

Figure 32. NCP APARs Required for Committed Information Rate (CIR)

Product Name	APAR
NCP V7R3	IR36380
NCP V7R4	IR36380
NCP V7R5	IR36380
NCP V7R6	IR36484

The NCP APAR listed in Figure 33 is required if you want to code TRANSBUF to indicate the number of transmission head buffers allocated for 3745 frame-relay physical lines.

Figure 33. NCP APAR Required for Transmission Head Buffers

Product Name	APAR
NCP V7R6	IR36886

The NCP APARs listed in Figure 34 are required to support up to 32 ESCON stations on the 3746 Model 900.

Figure 34. NCP APARs Required to Support 32 ESCON Stations

Product Name	APAR
NCP V7R7 MVS, VM	IR40131
NCP V7R6 MVS, VM	IR40131
NCP V7R7 VSE	IR40134
NCP V7R6 VSE	IR40134

The NCP APARs listed in Figure 35 are required to support 3746 Model 900 Token Ring (TIC 3) connection balancing.

Figure 35. NCP APARs Required to Support TIC 3 Connection Balancing

Product Name	APAR
NCP V7R7 MVS, VM	IR40132
NCP V7R6 MVS, VM	IR40132
NCP V7R7 VSE	IR40135
NCP V7R6 VSE	IR40135

The NCP APARs listed in Figure 36 are required to support 3746 Model 900 Frame Relay BAN connection balancing.

Figure 36. NCP APARs Required to Support Frame Relay BAN Connection Balancing

Product Name	**APAR**
NCP V7R7 MVS, VM	IR40133
NCP V7R7 VSE	IR40136

The NCP APARs listed in Figure 37 are required to generate EP R14 standalone with NCP V7R7.

Figure 37. NCP APARs Required to Generate EP R14 Standalone with NCP V7R7

Product Name	**APAR**
NCP V7R7 MVS, VM	IR41021
NCP V7R7 VSE	IR41022

The NCP APARs listed in Figure 38 are required if you predefine a bridged Token Ring 3745 subarea route.

Figure 38. NCP APARs Required to Predefine a bridged TR 3745 subarea route

Product Name	**APAR**
NCP V7R8 MVS, VM	IR42305
NCP V7R8 VSE	IR42306

The NCP APARs listed in Figure 39 are required if you want to validate the state of DYNPOOL control blocks when they are placed on the dispatching queue.

Figure 39. NCP APARs Required for DYNPOOL control blocks validation

Product Name	APAR
NCP V7R2 MVS	IR42308
NCP V7R3 MVS, VM	IR42308
NCP V7R4 MVS, VM	IR42308
NCP V7R4 VSE	IR42321
NCP V7R5 MVS, VM	IR42308
NCP V7R5 VSE	IR42321
NCP V7R6 MVS, VM	IR42308
NCP V7R6 VSE	IR42321
NCP V7R7 MVS, VM	IR42308
NCP V7R7 VSE	IR42321
NCP V7R8 MVS, VM	IR42308
NCP V7R8 VSE	IR42321

The NCP APARs listed in Figure 40 are required if you code PLPIGGYB or NETTYPE=3 for 3746 Model 900 X.25 lines.

Figure 40. NCP APARs Required to code PLPIGGYB or NETTYPE for 3746 Model 900 X.25

Product Name	APAR
NCP V7R8 MVS, VM	IR42600
NCP V7R8 VSE	IR42602

The NCP APARs listed in Figure 41 are required if you code the dw or dwc suboperand on the DYNWIND keyword for 3746 Model 900 Token Ring resources.

Figure 41. NCP APARs Required to use DYNWIND enhancements for 3746 Model 900 TR

Product Name	APAR
NCP V7R8 MVS, VM	IR42608
NCP V7R8 VSE	IR42611

5.4.3.2 Compatibility Requisites for EP/PEP

The EP APAR shown in Figure 42 is required to generate EP/PEP R14 with SSP NDF.

Figure 42. EP APAR Required to Generate EP/PEP R14 with SSP NDF.	
Product Name	**APAR**
EP/PEP R14	IR39913

5.4.3.3 Compatibility Requisites for NPSI

The NPSI APAR shown in Figure 43 is required to generate NPSI V3R8 with NCP V7R4, NCP V7R5, or NCP V7R6.

Figure 43. NPSI APAR Required to Generate NPSI V3R8 with NCP V7R4, NCP V7R5, or NCP V7R6	
Product Name	**APAR**
NCP NPSI V3R8	IR32271 IR37825

5.4.3.4 Compatibility Requisites for DFSMS

The APARs listed in Figure 44 are required to use the High Level Assembler.

Figure 44. APARs Required to Use the High Level Assembler	
Product Name	**APAR**
DFSMS/MVS Binder	OW26738
DFSMS/MVS Linkage Editor	OW27802
VM/ESA Linkage Editor	VM61534

5.4.3.5 Compatibility Requisites for VSE

The APARs listed in Figure 45 are required to use SSP V4R8 or higher with VSE.

Figure 45. APARs Required to Use SSP V4R8.1 with VSE

Product Name	APAR
VSE/ESA V2	DY45166
VSE/ESA V1R4	DY45163

5.4.3.6 Compatibility Requisites for OS390 TSO/E

The APAR listed in Figure 46 is required for users of OS/390 V2R10 or higher with TSO/E (HTE26D2) running in 64 bit mode in order to use SSP IPCS CLISTs

Figure 46. APAR Required to Use SSP IPCS CLISTs

Product Name	APAR
OS/390 V2R10 TSO/E (HTE26D2) running 64 bit mode	OW48150

6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of SSP V4R8.1 MVS.

Please note the following:

- If you want to install SSP V4R8.1 MVS into its own SMP/E environment, consult the SMP/E manuals for instructions on creating and initializing the SMPCSI and the SMP/E control data sets.
- Sample jobs have been provided to help perform some or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries required for SMP/E execution have been defined in the appropriate zones.
- The SMP/E dialogs may be used instead of the sample jobs to accomplish the SMP/E installation steps.

6.1 Installing SSP V4R8.1 MVS

6.1.1 SMP/E Considerations for Installing SSP V4R8.1 MVS

This release of SSP V4R8.1 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 Options Subentry Values

The recommended values for some SMP/E CSI subentries are shown in Figure 47. 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 47. SMP/E Options Subentry Values

SUB-ENTRY	Value	Comment
DSSPACE	(475,50,425)	Recommended Value
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 Unload the Sample JCL from the Product Tape

The following sample installation jobs are provided on the distribution tape to help you install SSP V4R8.1 MVS:

Figure 48. Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
IFWRECEV	RECEIVE	Sample RECEIVE job	IBM.HSP4481.F1
IFWALLOC	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HSP4481.F1
IFWDDDEF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HSP4481.F1
IFWAPPLY	APPLY	Sample APPLY job	IBM.HSP4481.F1
IFWACCEP	ACCEPT	Sample ACCEPT job	IBM.HSP4481.F1
IFWAPPCK	CHECK	Sample APPLY Check job	IBM.HSP4481.F1
IFWACCCK	CHECK	Sample ACCEPT Check job	IBM.HSP4481.F1

You may copy the jobs from the tape by submitting the job below. Add a job card and change the lowercase parameters to uppercase values to meet your site's requirements before submitting.

```
//STEP1    EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//IN       DD DSN=IBM.HSP4481.F1,UNIT=tunit,VOL=SER=SP4481,
//         LABEL=(2,SL),DISP=(OLD,KEEP)
//OUT      DD DSNAME=jcl-library-name,
//         DISP=(NEW,CATLG,DELETE),
//         VOL=SER=dasdvol,UNIT=SYSALLDA,
//         DCB=*.STEP1.IN,SPACE=(TRK,(30,3,10))
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
    COPY INDD=IN,OUTDD=OUT
/*
```

where **tunit** is the unit value matching the product tape or cartridge, **jcl-library-name** is the name of the data set where the sample jobs will reside, and **dasdvol** is the volume serial of the DASD device where the data set will reside.

You can also access the sample installation jobs by performing an SMP/E RECEIVE for FMID HSP4481, and then copying the jobs from data set **hlq.HSP4481.F1** to a work data set for editing and submission. Note: "hlq" is the high-level qualifier specified as the DSPREFIX value in the SMPTLIB DDDEF or the OPTIONS entry of the global zone.

6.1.4 Perform SMP/E RECEIVE

Edit and submit sample job IFWRECEV to perform the SMP/E RECEIVE for SSP V4R8.1 MVS. Consult the instructions in the sample job for more information.

NOTE: If you obtained SSP V4R8.1 MVS as part of a CBPDO, you can use the RCVPDO job found in the CBPDO RIMLIB data set to RECEIVE the SSP V4R8.1 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:

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

6.1.5 Allocate SMP/E Target and Distribution Libraries and Paths

Edit and submit sample job IFWALLOC to allocate the SMP/E target and distribution libraries for SSP V4R8.1 MVS. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages:

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

6.1.6 Create DDDEF Entries

Edit and submit sample job IFWDDDEF to create DDDEF entries for the SMP/E target and distribution libraries for SSP V4R8.1 MVS. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages:

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

6.1.7 Perform SMP/E APPLY

Edit and submit sample job IFWAPPCK to perform an SMP/E APPLY CHECK for SSP V4R8.1 MVS. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the APPLY CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Once you have taken any actions indicated by the APPLY CHECK, edit and submit sample job IFWAPPLY to perform the APPLY.

Note: The GROUPEXTEND operand indicates that SMP/E apply all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

Expected Return Codes and Messages from APPLY CHECK:

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

Expected Return Codes and Messages from APPLY:

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

6.1.8 Perform SMP/E ACCEPT

Edit and submit sample job IFWACCCK to perform an SMP/E ACCEPT CHECK for SSP V4R8.1 MVS. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the ACCEPT CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Before using SMP/E to load new distribution libraries, it is recommended that you set the ACCJCLIN indicator in the distribution zone. This will cause entries produced from JCLIN to be saved in the distribution zone whenever a SYSMOD containing inline JCLIN is ACCEPTed. For more information on the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E manuals.

Once you have taken any actions indicated by the ACCEPT CHECK, edit and submit sample job IFWACCEP to perform the ACCEPT.

Note: The GROUPEXTEND operand indicates that SMP/E accept all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

Expected Return Codes and Messages from ACCEPT CHECK:

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

Expected Return Codes and Messages from ACCEPT:

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

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 may 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.

6.2 Activating SSP V4R8.1 MVS

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 may 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.

Ensure the latest copy of SSP is retrieved for execution when you run SSP jobs. Remove all previous copies of the utility from the link list and concatenate the SSPLIB to the link list. If the SSPLIB is not concatenated to the link list, a STEPLIB DD card must be used in all SSP jobs.

The SSPLIB data set for this program must be installed into an APF-authorized library.

6.2.1 Considerations for an NCP-Only System

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

6.2.2 Considerations for a PEP (NCP and EP) System

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

6.2.3 Considerations for an EP Standalone System

If you are installing EP for a standalone environment system and have not already installed NCP and EP, refer to the appropriate program directory for product information and installation instructions. If you have already installed NCP and EP, you have completed installation for an EP standalone system, and you are ready to generate EP.

6.2.4 Considerations for Previous Releases of SSP

The SSP loader utility consists of the load modules IFLOADRN, IFLLD1P1, IFLLD1P2, IFLLD2P1, IFLLD2P2, and IFWLEVEL. If copies of these modules from an earlier SSP release are in your SYS1.LINKLIB data set, you should delete them before installing the new SSP release. By doing this, you will guard against accidentally executing an outdated version of the loader utility.

The SSP dumper utility consists of the load modules IFLH1DAS, IFLH1DIO, IFLH170X, IFWDMPT1, IFWDMPT2, IFWH1LIO, and IFWH1WRT. If copies of these modules from an earlier SSP release are in your SYS1.LINKLIB data set, you should delete them before installing the new SSP release. By doing this, you will guard against accidentally executing an outdated version of the dumper utility.

6.2.5 PDSE Considerations

The SSP loader utility IFLOADRN offers limited support of Partitioned Dataset Extended (PDSE). The following restrictions apply.

1. The SSP loader requires that a PDSE dataset be on a system managed volume.
2. For SSP V4R6 and earlier releases, you can generate the NCP load module directly into the PDSE dataset.

   For SSP V4R7 and later releases, because the High Level Assembler is a part of the NCP generation process, you cannot generate the NCP load module directly into the PDSE dataset. Instead, you need to first generate the NCP load module into a Partitioned Dataset (PDS), then use the BINDER to copy the NCP load module from the PDS into the PDSE.
3. When loading from a system managed PDSE dataset, the loader requires enough storage to build an image of the NCP into real storage.

Reader's Comments

Program Directory for System Support Programs Version 4 Release 8, Modification Level 1 for MVS

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RATING SCALE

```
  very                                very          not
satisfied  <====================>  dissatisfied  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

How did you order this product?

___ CBPDO
___ CustomPac
___ ServerPac
___ 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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