900 Series HP 3000 Computer Systems

HP SNA Products Remote System Configuration Guide

HP Part No. J2220-61025
Printed in U.S.A. 1995

Third Edition
E0395

Printing History

New editions are complete revisions of the manual. Updates, which are issued between editions, contain additional and replacement pages to be merged into the manual. The dates on the title page change only when a new edition or a new update is published.

Edition 1 . . . . . December 1992

Edition 2 . . . . . December 1993

Edition 3 . . . . . March 1995

List of Effective Pages

The List of Effective Pages gives the date of the current edition and of any pages changed in updates to that edition.

All Pages . . . . . March 1995

Preface

MPE/iX, Multiprogramming Executive with Integrated POSIX, is the latest in a series of forward-compatible operating systems for the HP 3000 line of computers.

In HP documentation and in talking with HP 3000 users, you will encounter references to MPE XL, the direct predecessor of MPE/iX. MPE/iX is a superset of MPE XL. All programs written for MPE XL will run without change under MPE/iX. You can continue to use MPE XL system documentation, although it may not refer to features added to the operating system to support POSIX (for example, hierarchical directories).

Finally, you may encounter references to MPE V, which is the operating system for HP 3000s, not based on PA-RISC architecture. MPE V software can be run on the PA-RISC (Series 900) HP 3000s in what is known as *compatibility mode*.

This manual describes the requirements for configuring an IBM remote system for communications with Hewlett-Packard Systems Network Architecture (SNA) products. The following remote configurations are described:

- Advanced Communication Function Network Control Program (ACF/NPC) and Advanced Communication Function Virtual Telecommunication Access Method (ACF/VTAM)
- Job Entry Subsystem (JES)
- Customer Information Control System (CICS)
- Information Management System (IMS)
- Distributed Office System Services (DISOSS)
- AS/400 computer systems

This manual does not describe the features and functions of HP SNA products. Refer to the product documentation for detailed information on product features.

Audience

The intended audience includes HP system and network administrators, and anyone who might be involved in configuring and supporting communications between HP SNA subsystems and supported remote systems.

Assumptions

This manual assumes that the reader has knowledge of the following:

- SNA data communications.
- The operating system environment of the HP system (MPE/V or MPE/iX).

This manual is not intended as a replacement of any IBM configuration manuals.

Manual Organization

This manual is organized into the following chapters:

Chapter 1, VTAM Configuration, describes the required NCP and VTAM configurations for HP SNA products running on MPE/V or MPE/iX platforms. Relevant NCP and VTAM macros and operands are described in the last section of the chapter.

Chapter 2, JES Configuration, describes the required JES2, JES3, and POWER configurations for SNA NRJE (MPE/V and MPE/iX). Relevant JES and POWER macros and parameters are described in the second half of the chapter.

Chapter 3, CICS Configuration, describes the required CICS configurations for SNA IMF (MPE/V and MPE/iX), LU 6.2 API (MPE/V and MPE/iX), LU 6.2 Base/V, and HP SNADS/iX. Relevant CICS macros and operands are described in the second half of the chapter.

Chapter 4, IMS Configuration, describes the required IMS configurations for SNA IMF (MPE/V and MPE/iX). Relevant IMS macros and operands are described in the chapter.

Chapter 5, DISOSS Configuration, describes the required DISOSS configuration HP SNADS/iX. This chapter describes how to use the worksheets that are provided to configure users. This chapter also describes the DISOSS Host User Profile (HUP) configuration for adding new users.

Chapter 6, AS/400 Configuration, describes the required IBM AS/400 configurations for SNA IMF (MPE/V and MPE/iX), SNA IMF/iX over X.25, NS over SNA/iX, and LU 6.2 API/iX.

Appendix A, VTAM Examples, contains sample NCP and VTAM configurations for various HP SNA products.

Appendix B, JES Examples, contains sample JES and POWER configurations.

Appendix C, CICS Examples, contains sample CICS configurations.

Appendix D, IMS Examples, contains sample IMS configurations.

Appendix E, DISOSS Examples, contains samples of HP configuration worksheets and DISOSS configurations.

Appendix F, AS/400 Examples, contains sample AS/400 configurations.

Conventions

`UPPERCASE` In a syntax statement, commands and keywords are shown in uppercase characters. The characters must be entered in the order shown; however, you can enter the characters in either uppercase or lowercase. For example:

```
COMMAND
```

can be entered as any of the following:

```
command        Command        COMMAND
```

It cannot, however, be entered as:

```
comm           com_mand       comamnd
```

italics In a syntax statement or an example, a word in italics represents a parameter or argument that you must replace with the actual value. In the following example, you must replace *filename* with the name of the file:

`COMMAND` *filename*

bold italics In a syntax statement, a word in bold italics represents a parameter that you must replace with the actual value. In the following example, you must replace filename with the name of the file:

```
COMMAND(filename)
```

punctuation In a syntax statement, punctuation characters (other than brackets, braces, vertical bars, and ellipses) must be entered exactly as shown. In the following example, the parentheses and colon must be entered:

(*filename*):(*filename*)

underlining Within an example that contains interactive dialog, user input and user responses to prompts are indicated by underlining. In the following example, "`yes`" is the user's response to the prompt:

```
Do you want to continue? >>  yes
```

`{ }` In a syntax statement, braces enclose required elements. When several elements are stacked within braces, you must select one. In the following example, you must select either `ON` or `OFF`:

`COMMAND` { `ON` / `OFF` }

`[ ]` In a syntax statement, brackets enclose optional elements. In the following example, `OPTION` can be omitted:

`COMMAND` *filename* `[OPTION]`

When several elements are stacked within brackets, you can select one or none of the elements. In the following example, you can select `OPTION` or *parameter* or neither. The elements cannot be repeated.

`COMMAND` *filename* [`OPTION` / *parameter*]

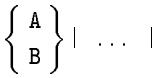
[...] In a syntax statement, horizontal ellipses enclosed in brackets indicate that you can repeatedly select the element(s) that appear within the immediately preceding pair of brackets or braces. In the example below, you can select *parameter* zero or more times. Each instance of *parameter* must be preceded by a comma:

```
[,parameter][...]
```

In the example below, you only use the comma as a delimiter if *parameter* is repeated; no comma is used before the first occurrence of *parameter*:

```
[parameter][,...]
```

| ... | In a syntax statement, horizontal ellipses enclosed in vertical bars indicate that you can select more than one element within the immediately preceding pair of brackets or braces; however, each particular element can be selected only once. In the following example, you must select **A, AB, BA**, or **B**. The elements cannot be repeated.



... In an example, horizontal or vertical ellipses indicate where portions of an example have been omitted.

In a syntax statement, the space symbol ␣ shows a required blank. In the following example, *parameter* and *parameter* must be separated with a blank:

```
(parameter) (parameter)
```

⟨ ⟩ The symbol ⟨ ⟩ indicates a key on the keyboard. For example, ⟨RETURN⟩ represents the carriage return key or ⟨Shift⟩ represents the shift key.

⟨CTRL⟩*character* ⟨CTRL⟩*character* indicates a control character. For example, ⟨CTRL⟩Y means that you press the control key and the Y key simultaneously.

Contents

Figures

Tables

1

ACF/NCP and ACF/VTAM Configuration

This chapter describes the IBM Advanced Communication Function Network Control Program (ACF/NCP) and Advanced Communication Function Virtual Telecommunication Access Method (ACF/VTAM) configuration parameters necessary for the operation of HP SNA products for the following two platforms:

- MPE/V
- MPE/iX

MPE/V SNA Product Configuration

This section covers remote system configuration requirements for the following MPE/V SNA products:

- SNA Link
- SNA IMF
- SNA NRJE
- LU 6.2 Base
- LU 6.2 API

This section presents the requirements for ACF/NCP and ACF/VTAM for switched and non-switched lines and logmode table parameters.

ACF/NCP and ACF/VTAM Requirements

The ACF/VTAM start parameters refer to the table and buffer size definitions that ACF/VTAM uses to configure the resource requirements for the network. Because start parameters apply to the entire VTAM domain and are not specific to the remote node, HP does not make any suggestions. HP does recommend that the ACF/VTAM system programmer review the defined values and make any adjustments for additional requirements put on the system.

The tables in this section contain the parameters that HP allows for its MPE/V SNA products. Operands and values that you must specify are noted. The tables also contain other operands that are allowed. For operand definitions, refer to the section `Parameter Descriptions` at the end of this chapter, or to the appropriate NCP or VTAM manual for the remote system.

Warning

The HP SNA products are emulations of IBM products. Thus, some parameters will need particular values based on the requirements of the HP products. Code these as specified or results are unpredictable. Operands not listed are not allowed in the HP SNA services definitions and therefore are not supported. Any time spent solving problems related to incorrect configuration of the host is billable to the customer on a time and materials basis.

For MPE/V SNA products, more than one PU (Physical Unit) may be defined for an HP 3000 node. A maximum of eight PUs can be defined for each HP 3000 node. The number of PUs defined depends upon the number of SNA Link products installed.

A maximum of 64 LUs (Logical Units) can be configured for each HP 3000 PU. For SNA NRJE/V, it is recommended that at least three LUs be defined. SNA IMF can support a maximum of 64 LUs. The LU 6.2 products can start a maximum of eight LUs. See the MPE/V SNA product documentation for more information on configuration requirements.

Switched Lines

Tables 1-1 and 1-2 define the parameters necessary to connect MPE/V SNA products to a switched line. Any values listed that are not required are given as examples. See `Parameter Descriptions` at the end of this chapter or refer to the appropriate NCP or VTAM manual for the remote system for more information.

Table 1-1. MPE/V Products: NCP/VTAM Switched Line

Operands and Values	Comments
LUDRPOOL macro	
NUMTYPE2=n	Required by all MPE/V SNA products.
GROUP macro	
DIAL=YES	Required by all MPE/V SNA products.
LNCTL=SDLC	Required by all MPE/V SNA products.
REPLYTO	
TEXTTO	
TYPE=NCP	Required by all MPE/V SNA products.
LINE macro	
ADDRESS=*line addr*	Required by all MPE/V SNA products.
SPEED=*rate*	Required by all MPE/V SNA products.
ANSWER=ON	Required by all MPE/V SNA products.
CALL=IN	Required by all MPE/V SNA products.
CLOCKNG=EXT	Required by all MPE/V SNA products.
DATRATE	
DUPLEX	
ETRATIO	
HDXSP	
INTPRI	
LPDATS	
MAXPU=1	Required by all MPE/V SNA products.
NRZI=NO	Required by all MPE/V SNA products.
PAUSE	
POLLED=YES	Required for ACF/NCP version 1, release 1 and 2. Invalid for ACF/NCP version 1, release 3, and later versions.
RETRIES=7	
RING	
SPDSEL	
TRANSFER	
OWNER	

Table 1-2. MPE/V Products: VTAMLST Switched Major Node

Operands and Values	Comments
VBUILD macro	
TYPE=SWNET	Required by all MPE/V SNA products.
PU macro	
puname PU	Required by all MPE/V SNA products.
ADDR=*n*	Required by all MPE/V SNA products.
ANS	Required by all MPE/V SNA products.
IDBLK=023	Required for LU 6.2 API/V, LU 6.2 Base/V, SNA IMF/V, and SNA NRJE/V.
IDNUM=*n*	Required by all MPE/V SNA products.
DISCNT=NO	
ISTATUS	
MAXLU	
PUTYPE=2	Required by all MPE/V SNA products.
SRT	
XID=YES	Required for node type 2.1 (T2.1).
LU macro	
luname LU	Required by all MPE/V SNA products.
LOCADDR=*n*	Required by all MPE/V SNA products. Set to 0 for independent LUs.
BATCH=YES	Recommended for SNA NRJE/V on applicable versions of ACF/NCP. This parameter is not supported for ACF/NCP version 5 or later.
DLOGMOD	
ISTATUS	
MODETAB=HPMODTAB	
PACING=0	Recommended for SNA IMF/V
SSCPFM=FSS	Required for LU 6.2 API/V, LU 6.2 Base/V, and SNA NRJE/V.
SSCPFM=USSSCS	Required for SNA IMF/V.
VPACING=0	Recommended for SNA IMF/V keyboards and displays.
USSTAB	Must be specified for SNA IMF/V only. Do not specify for SNA NRJE/V or LU 6.2 products.
LOGAPPL	Can be used with SNA IMF/V only. Do not specify for SNA NRJE/V.

Non-Switched Lines

Table 1-3 defines the parameters necessary to connect MPE/V SNA products to a leased (non-switched) line. See `Parameter Descriptions` at the end of this chapter or refer to the appropriate NCP or VTAM manual for the remote system for more information.

Table 1-3. MPE/V Products: NCP/VTAM Non-Switched Line

Operands and Values	Comments
`GROUP macro`	
`DIAL=NO`	Required by all MPE/V SNA products.
`LNCTL=SDLC`	Required by all MPE/V SNA products.
`REPLYTO`	
`TEXTTO`	
`TYPE=NCP`	Required by all MPE/V SNA products.
`LINE macro`	
`ADDRESS=`*line addr*	Required by all MPE/V SNA products.
`SPEED=`*rate*	Required by all MPE/V SNA products.
`CLOCKNG=EXT`	Required by all MPE/V SNA products.
`DATRATE`	
`DUPLEX`	
`ETRATIO`	
`HDXSP`	
`INTPRI`	
`LPDATS`	
`MAXPU`	
`NRZI=NO`	Required for SNA NRJE/V, SNA IMF/V, LU 6.2 Base/V, and LU 6.2 API/V.
`PAUSE`	
`POLLED=YES`	Required for ACF/NCP version 1, release 1 and 2. Invalid for ACF/NCP version 1, release 3, and later versions.
`RETRIES`	
`SERVLIM`	
`SPDSEL`	
`TRANSFER`	
`OWNER`	

Table 1-3. MPE/V Products: NCP/VTAM Non-Switched Line (cont.)

Operands and Values	Comments
SERVICE macro	
ORDER	
MAXLIST	
PU macro	
puname PU	Required by all MPE/V SNA products.
ADDR=*n*	Required by all MPE/V SNA products.
ANS	
DISCNT=NO	
IRETRY	
ISTATUS	
MAXDATA=265	Required by all MPE/V SNA products.
or MAXDATA=521	
MAXOUT=7	
PASSLIM=7	
PUTYPE=2	Required by all MPE/V SNA products.
RETRIES=7	
SRT	
XID=YES	Required for type 2.1 node.
LU macro	
luname LU	Required by all MPE/V SNA products.
LOCADDR=*n*	Required by all MPE/V SNA products. Set to 0 for independent LUs.
BATCH=YES	Recommended for SNA NRJE/V on applicable versions of ACF/NCP. This parameter is not supported for ACF/NCP version 5 or later.
DLOGMOD	
ISTATUS	
MODETAB=HPMODTAB	
PACING=0	Recommended for SNA IMF/V keyboards and displays.
SSCPFM=FSS	Required for LU 6.2 API/V, LU 6.2 Base/V, and SNA NRJE/V.
SSCPFM=USSSCS	Required for SNA IMF/V.
VPACING=0	Recommended for SNA IMF/V keyboards and displays.
USSTAB	Must be specified for SNA IMF/V only. Do not specify for SNA NRJE/V or LU 6.2 products.
LOGAPPL	Can be used with SNA IMF/V only. Do not specify for SNA NRJE/V.

Logmode Table Requirements

The Logmode table definitions determine the operating characteristics of the session with a host LU—the bind parameters. The tables in this section define the Logmode table parameters necessary for MPE/V SNA products.

Tables 1-4, 1-5, and 1-6 contain Logmode table parameters required for SNA NRJE/V for the JES2, JES3, and POWER job entry subsystems. Table 1-7 contains the Logmode table parameters required for SNA IMF/V. Table 1-8 contains the Logmode table parameters required for the LU 6.2 products, LU 6.2 Base/V and LU 6.2 API/V.

Table 1-4. SNA NRJE/V: JES2 Logmode Table

Required Parameters	Values (hexadecimal)	Comments
COMPROT	7080	Required value.
FMPROF	03	Required value.
LOGMODE	MODENRJE	Suggested value.
PSNDPAC	3	Suggested value.
PRIPROT	B1 or B3 B3	Required value.
PSERVIC	01102000F100C00000010040	Suggested value.
RUSIZES*	8585	Required value.
SECPROT	A3	Suggested value.
SSNDPAC	3	Suggested value.
SRCVPAC	3	Suggested value.
TSPROF	03	Required value.

* See `Parameter Descriptions` at the end of this chapter for an explanation of RUSIZES values.

Table 1-5. SNA NRJE/V: JES3 Logmode Table

Required Parameters	Values (hexadecimal)	Comments
COMPROT	7080	Required value.
FMPROF	03	Required value.
LOGMODE	MODENRJE	Suggested value.
PSNDPAC	3	Suggested value.
PRIPROT	A1, A3, B1, or B3	Required value.
PSERVIC	01102000F100C00000010040	Suggested value.
RUSIZES*	8686	Required value.
SECPROT	A1 or A3	Required value.
SSNDPAC	3	Suggested value.
SRCVPAC	3	Suggested value.
TSPROF	03	Required value.

* See Parameter Descriptions at the end of this chapter for an explanation of RUSIZES values.

Table 1-6. SNA NRJE/V: POWER Logmode Table

Required Parameters	Values (hexadecimal)	Comments
COMPROT	7080	Required value.
FMPROF	03	Required value.
LOGMODE	MODENRJE	Suggested value.
PSNDPAC	3	Suggested value.
PRIPROT	A3 B3	Required value.
PSERVIC	01102000F100C00000010040	Suggested value.
RUSIZES*	8585	Required value.
SECPROT	A1	Required value.
SSNDPAC	3	Suggested value.
SRCVPAC	3	Suggested value.
TSPROF	03	Required value.

* See Parameter Descriptions at the end of this chapter for an explanation of RUSIZES values.

Table 1-7. SNA IMF/V: Logmode Table

Required Parameters	Values (hexadecimal)	Comments
COMPROT	3080	Required value.
FMPROF	03	Required value.
LOGMODE	IMFLU1 for LU.T1 IMF1920 for LU.T2 with 1920 size screen IMF480 for LU.T2 with 480 size screen IMF3440 for LU.T2 with 3440 size screen IMFLU3 for LU.T3	Suggested value.
PSNDPAC	3	Suggested value.
PRIPROT	11, 21, 31, A1, or B1	Required value.
PSERVIC	Printer (LU.T1): 01000000E100000000000000 Terminal (LU.T2) and screen size of 1920: 020000000000000000000200 02000000000185000007E00 02000000000185018507F00 Terminal (LU.T2) and screen size of 480: 020000000000000000000100 0200000000000C280C287E00 0200000000000C280C287F00 Terminal (LU.T2) and screen size of 3440: 0200000000002B5000007E00 02000000000018502B507E00 Printer (LU.T3): 030000000000000000000200	Suggested values.

Table 1-7. SNA IMF/V: Logmode Table (cont.)

Required Parameters	Values (hexadecimal)	Comments
RUSIZES*	Must be 8989 or less. 8587–LU.T1 Printer 8989–LU.T2 Terminal	Suggested value.
SECPROT	90 (LU.T1/T3 printer), A0, or B0 (LU.T2 display station)	Required value.
SSNDPAC	3–LU.T1 and LU.T3 printers 0–LU.T2 terminals	Suggested value.
SRCVPAC	3	Suggested value.
TSPROF	03	Required value.

* See Parameter Descriptions at the end of this chapter for an explanation of RUSIZES values.

Table 1-8. MPE/V LU 6.2: Logmode Table

Required Parameters	Values (hexadecimal)	Comments
LOGMODE	MODE62	Suggested value.
PSERVIC	000000000000000000000000	Suggested value.
PSNDPAC	3 for LU 6.2 Base/V 3 for LU 6.2 API/V	Suggested value.
SSNDPAC	0	Suggested value.
SRCVPAC	0	Suggested value.

Note

The values in table 1-8 are for node type 2.0 (T2.0) only. For T2.1 LUs (that is, independent LUs), the actual logmode value is not important, as long as the logmode is a valid one.

MPE/iX SNA Product Configuration

This section covers remote system configuration requirements for the following MPE/iX SNA products:

- SNA/SDLC Link/iX
- SNA/X.25 Link/iX
- SNA/Token Ring Link/iX
- SNA DHCF/iX
- SNA IMF/iX
- SNA NRJE/iX
- LU 6.2 API/iX
- HP SNADS/iX

This section presents the requirements for:

- ACF/NCP and ACF/VTAM for switched and non-switched lines
- NCP Token-Ring Interconnection (NTRI)
- X.25 NCP Packet Switching Interface (NPSI)
- logmode table parameters.

ACF/NCP and ACF/VTAM Requirements

The ACF/VTAM start parameters refer to the table and buffer size definitions that ACF/VTAM uses to configure the resource requirements for the network. Because start parameters apply to the entire VTAM domain and are not specific to the remote node, HP does not make any suggestions. HP does recommend that the ACF/VTAM system programmer review the defined values and make any adjustments for additional requirements put on the system.

The tables in this section contain the parameters that HP allows for its MPE/iX SNA products. Operands and values that you must specify are noted. The tables also contain other operands that are allowed. For operand definitions, refer to the section `Parameter Definitions` at the end of this chapter, or to the appropriate NCP or VTAM manual for the remote system.

Warning

The HP SNA products are emulations of IBM products. Thus, some parameters will need particular values based on the requirements of the HP products. Code these as specified or results are unpredictable. Operands not listed are not allowed in the HP SNA services definitions and therefore are not supported. Any time spent solving problems related to incorrect configuration of the host is billable to the customer on a time and materials basis.

For MPE/iX SNA products, more than one PU may be defined for an HP 3000. A maximum of eight PUs can be defined for each HP 3000 with SDLC links. Multiple PUs can be defined for each HP 3000 SNA Token Ring Link. The number of PUs defined depends upon the number of SNA Link products installed.

A maximum of 255 LUs can be configured for each HP 3000 PU. For SNA NRJE/iX, it is recommended that at least three LUs be defined. SNA IMF can support a maximum of 64 LUs. The LU 6.2 products can start a maximum of eight LUs. See the MPE/iX SNA product documentation for more information on configuration requirements.

Switched Lines

Tables 1-9 and 1-10 define the parameters necessary to connect MPE/iX SNA products to a switched line. Any values listed that are not required are given as examples. See `Parameter Descriptions` at the end of this chapter or refer to the appropriate NCP or VTAM manual for the remote system for more information.

Table 1-9. MPE/iX SNA Products: NCP/VTAM Switched Line

Operands and Values	Comments
LUDRPOOL macro	
NUMTYPE2=n	Required by all MPE/iX SNA products.
GROUP macro	
DIAL=YES	Required by all SNA products.
LNCTL=SDLC	Required by all MPE/iX SNA products.
REPLYTO	
TEXTTO	
TYPE=NCP	Required by all MPE/iX SNA products.
LINE macro	
ADDRESS=*line addr*	Required by all MPE/iX SNA products.
SPEED=*rate*	Required by all MPE/iX SNA products.
ANSWER=ON	Required by all MPE/iX SNA products.
CALL=IN	Required by all MPE/iX SNA products.
CLOCKNG=EXT	Required by all MPE/iX SNA products.
DATRATE	
DUPLEX	
ETRATIO	
HDXSP	
INTPRI	
LPDATS	
MAXPU=1	Required by all MPE/iX SNA products.
NRZI=YES	Allowed for SNA NRJE/iX, SNA IMF/iX, LU 6.2 API/iX, and HP SNADS/iX.
PAUSE	
POLLED=YES	Required for ACF/NCP version 1, release 1 and 2. Invalid for ACF/NCP version 1, release 3, and later versions.
RETRIES=7	
RING	
SPDSEL	
TRANSFER	
OWNER	

Table 1-10. MPE/iX SNA Products: VTAMLST Switched Major Node

Operands and Values	Comments
VBUILD macro	
TYPE=SWNET	Required by all MPE/iX SNA products.
PU macro	
puname PU	Required by all MPE/iX SNA products.
ADDR=*n*	Required by all MPE/iX SNA products.
ANS	Required by all MPE/iX SNA products.
IDBLK=023	Required for SNA IMF/iX, SNA NRJE/iX, LU 6.2 API/iX, HP SNADS/iX, SNA DHCF/iX.
IDNUM=*n*	Required by all MPE/iX SNA products.
DISCNT=NO	
ISTATUS	
MAXLU	
PUTYPE=2	Required by all MPE/iX SNA products.
SRT	
XID=YES	Required for PU type 2.1 (T2.1).

Table 1-10. MPE/iX SNA Products: VTAMLST Switched Major Node (cont.)

Operands and Values	Comments
LU macro	
luname LU	Required by all MPE/iX SNA products.
LOCADDR=*n*	Required by all MPE/iX SNA products. Set to 0 for independent LUs.
BATCH=YES	Recommended for SNA NRJE/iX on applicable versions of ACF/NCP. This parameter is not supported for ACF/NCP version 5 or later.
DLOGMOD	Do not specify for SNA DHCF/iX.
ISTATUS	
MODETAB=HPMODTAB	Do not specify for SNA DHCF/iX.
PACING=0	Recommended for SNA IMF/iX.
SSCPFM=FSS	Required for LU 6.2 API/iX, SNA NRJE/iX, HP SNADS/iX, and SNA DHCF/iX.
SSCPFM=USSSCS	Required for SNA IMF/iX.
VPACING=0	Recommended for SNA IMF/iX keyboards and displays.
USSTAB	Must be specified for SNA IMF/iX only. Do not specify for SNA NRJE/iX, SNA DHCF/iX, or LU 6.2 products.
LOGAPPL	Can be used with SNA IMF/iX only. Do not specify for SNA NRJE/iX, or SNA DHCF/iX.

Non-Switched Lines

Table 1-11 defines the parameters necessary to connect MPE/iX SNA products to a leased (non-switched) line. See `Parameter Descriptions` at the end of this chapter or refer to the appropriate NCP or VTAM manual for the remote system for more information.

Table 1-11. MPE/iX SNA Products: NCP/VTAM Non-Switched Line

Operands and Values	Comments
`GROUP macro`	
`DIAL=NO`	Required by all MPE/iX SNA products.
`LNCTL=SDLC`	Required by all MPE/iX SNA products.
`REPLYTO`	
`TEXTTO`	
`TYPE=NCP`	Required by all MPE/iX SNA products.
`LINE macro`	
`ADDRESS=`*line addr*	Required by all MPE/iX SNA products.
`SPEED=`*rate*	Required by all MPE/iX SNA products.
`CLOCKNG=EXT`	Required by all MPE/iX SNA products.
`DATRATE`	
`DUPLEX`	
`ETRATIO`	
`HDXSP`	
`INTPRI`	
`LPDATS`	
`MAXPU`	
`NRZI=YES`	Allowed for SNA NRJE/iX, SNA IMF/iX, LU 6.2 API/iX, and HP SNADS/iX.
`PAUSE`	
`POLLED=YES`	Required for ACF/NCP ver. 1, rel. 1 or 2. Invalid for ACF/NCP ver. 1, rel. 3, and later versions.
`RETRIES`	
`SERVLIM`	
`SPDSEL`	
`TRANSFER`	
`OWNER`	

Table 1-11. MPE/iX SNA Products: NCP/VTAM Non-Switched Line (cont.)

Operands and Values	Comments
SERVICE macro	
ORDER	
MAXLIST	
PU macro	
puname PU	Required by all MPE/iX SNA products.
ADDR=*n*	Required by all MPE/iX SNA products.
ANS	
DISCNT=NO	
IRETRY	
ISTATUS	
MAXDATA=265 or MAXDATA=521	Required by all MPE/iX SNA products.
MAXOUT=7	
PASSLIM=7	
PUTYPE=2	Required by all MPE/iX SNA products.
RETRIES=7	
SRT	
XID=YES	Required for type 2.1 node.

Table 1-11. MPE/iX SNA Products: NCP/VTAM Non-Switched Line (cont.)

Operands and Values	Comments
LU macro	
luname LU	Required by all MPE/iX SNA products.
LOCADDR=*n*	Required by all MPE/iX SNA products. Set to 0 for independent LUs.
BATCH=YES	Recommended for SNA NRJE/iX on applicable versions of ACF/NCP. This parameter is not supported for ACF/NCP version 5 or later.
DLOGMOD	Do not specify for SNA DHCF/iX.
ISTATUS	
MODETAB=HPMODTAB	Do not specify for SNA DHCF/iX.
PACING=0	Recommended for SNA IMF/iX keyboards and displays.
SSCPFM=FSS	Required for LU 6.2 API/iX, HP SNADS/iX, SNA NRJE/iX, and SNA DHCF/iX.
SSCPFM=USSSCS	Required for SNA IMF/iX.
VPACING=0	Recommended for SNA IMF/iX keyboards and displays.
USSTAB	Must be specified for SNA IMF/iX only. Do not specify for SNA NRJE/iX, SNA DHCF/iX, or LU 6.2 products.
LOGAPPL	Can be used with SNA IMF/iX only. Do not specify for SNA NRJE/iX, or LU 6.2 products.

NTRI Requirements

This section defines the Network Control Program Token-Ring Interconnection (NTRI) parameters that are necessary for a successful connection between a host and MPE/iX SNA products.

The ACF/VTAM start parameters refer to the table and buffer size definitions that ACF/VTAM uses to configure the resource requirements for the network. Because start parameters apply to the whole network and are not specific to the remote node, HP does not make any suggestions. HP does recommend that the ACF/VTAM system programmer review the defined values and make any adjustments for additional requirements put on the system.

The tables in this section contain the parameters that HP allows for its MPE/iX SNA products. Operands and values that you must specify are noted. The tables also contain other operands that are allowed. For operand definitions, refer to the section `Parameter Definitions` at the end of this chapter, or to the appropriate NCP or VTAM manual for the remote system.

Warning

The HP SNA products are emulations of IBM products. Thus, some parameters will need particular values based on the requirements of the HP products. Code these as specified or results are unpredictable. Operands not listed are not allowed in the HP SNA services definitions and therefore are not supported. Any time spent solving problems related to incorrect configuration of the host is billable to the customer on a time and materials basis.

NTRI Parameters

NTRI is an NCP function that allows a communications controller to be attached to an IBM Token-Ring network. NTRI provides SNA subarea and peripheral nodes with data link control services. Table 1-12 contains NTRI parameters that are defined in NCP. Table 1-13 contains the VTAM switched major node parameters for NTRI.

Table 1-12. MPE/iX SNA Products: NTRI Parameters

Operands and Values	Comments
GROUP macro (physical)	
ECLTYPE=(PHYSICAL, PERIPHERAL)	Required by all MPE/iX SNA products.
COMPSWP=NO	Required for NCP version 5, release 2.1 and earlier.
DIAL=NO	
LNCTL=SDLC	Required by all MPE/iX SNA products.
TYPE=NCP	Required by all MPE/iX SNA products.
LINE macro	
ADAPTER=TIC1 or ADAPTER=TIC2	Required by all MPE/iX SNA products.
ADDRESS=*lnbr*, FULL	Required by all MPE/iX SNA products.
PORTADD=*n*	Required by all MPE/iX SNA products.
LOCADD=4000*abbbbbbb*	Required by all MPE/iX SNA products.
RCVBUFC=*n*	Required by all MPE/iX SNA products.
PU macro	
puname PU	Required by all MPE/iX SNA products.
LU macro	
luname LU	Required by all MPE/iX SNA products.

Table 1-12. MPE/iX SNA Products: NTRI Parameters (cont.)

Operands and Values	Comments
GROUP macro (logical)	
ECLTYPE=(LOGICAL,	
PERIPHERAL)	Required by all MPE/iX SNA products.
DIAL=YES	Required by all MPE/iX SNA products.
PHYPORT=*n*	Required by all MPE/iX SNA products.
LINE macro	
linename LINE	Required by all MPE/iX SNA products.
PU macro	
puname LU	Required by all MPE/iX SNA products.

Note

Table 1-13 contains those parameters that are added to the BUILD statement for NTRI. It does not contain all of the parameters that are necessary for a complete BUILD statement.

Table 1-13. MPE/iX SNA Products: NTRI Switched Major Node

Operands and Values	Comments
VBUILD macro	
TYPE=SWNET	Required by all MPE/iX SNA products.
PU macro	
puname PU	Required by all MPE/iX SNA products. Must match logical PU name.
ADDR=*n*	Required by all MPE/iX SNA products.
ANS=CONT	Required by all MPE/iX SNA products.
IDBLK=*n*	Required by all MPE/iX SNA products.
IDNUM=*n*	Required by all MPE/iX SNA products.
DISCNT=NO	
ISTATUS=ACTIVE	
MAXDATA	
MAXLU	
PUTYPE=2	Required by all MPE/iX SNA products.
SRT	
XID=YES	Required for PU type 2.1 (T2.1).
MAXDATA=*n*	Required by all MPE/iX SNA products.
LU macro	
luname LU	Required by all MPE/iX SNA products.
LOCADDR=*n*	Required by all MPE/iX SNA products. Set to 0 for independent LUs.
DLOGMOD	Do not specify for SNA DHCF/iX.

X.25 NPSI Requirements

This section defines the X.25 Network Control Program Packet Switching Interface (NPSI) parameters that are necessary for a successful connection between a host and MPE/iX SNA products.

The ACF/VTAM start parameters refer to the table and buffer size definitions that ACF/VTAM uses to configure the resource requirements for the network. Because start parameters apply to the whole network and are not specific to the remote node, HP does not make any suggestions. HP does recommend that the ACF/VTAM system programmer review the defined values and make any adjustments for additional requirements put on the system.

The tables in this section contain the parameters that HP allows for its MPE/iX SNA products. Operands and values that you must specify are noted. The tables also contain other operands that are allowed. For operand definitions, refer to the section `Parameter Definitions` at the end of this chapter, or to the appropriate NCP or VTAM manual for the remote system.

Warning

The HP SNA products are emulations of IBM products. Thus, some parameters will need particular values based on the requirements of the HP products. Code these as specified or results are unpredictable. Operands not listed are not allowed in the HP SNA services definitions and therefore are not supported. Any time spent solving problems related to incorrect configuration of the host is billable to the customer on a time and materials basis.

Common SVC and PVC Parameters

Tables 1-14 contains NPSI parameters that are common to both Switched Virtual Circuits (SVCs) and Permanent Virtual Circuits (PVCs).

Note

Table 1-14 contains those parameters that are added to the BUILD statement for X.25 NPSI. It does not contain all of the parameters that are necessary for a complete BUILD statement.

Table 1-14. MPE/iX SNA Products: Common SVC/PVC Parameters

Operands and Values	Comments
BUILD macro	
X25.MAXPIU=*n*	Required by all MPE/iX SNA products.
X25.MWINDOW=7	Required by all MPE/iX SNA products.
X25.PREFIX	
X25.SNAP	
X25.USGTIER	
X25.NET macro	
CPHINDX	
DM	Required by all MPE/iX SNA products.
NETTYPE	
OUHINDX	
X25.VCCPT macro	
INDEX=*index*	
INSLOW	
MAXPKL=128	Required by all MPE/iX SNA products.
VWINDOW=7	
X25.MCH macro	
ADDRESS=*address*	Required by all MPE/iX SNA products.
ANS=CONTINUE	
CONNECT=NO	Required by all MPE/iX SNA products.
DBIT=NO	Required by all MPE/iX SNA products.
DIRECT	
DSABLTO	
ENABLETO	
FRMLGTH=*length*	Required by all MPE/iX SNA products.
GATE=NO	Required by all MPE/iX SNA products.
ISTATUS	
ITRACE	
LCGDEF	Required by all MPE/iX SNA products.
LLC3	
LCNO	

Table 1-14. MPE/iX SNA Products: Common SVC/PVC Parameters (cont.)

Operands and Values	Comments
LLCLIST=LLC3	Required by all MPE/iX SNA products.
MWINDOW	Required by all MPE/iX SNA products.
SUBADDR	
NCPGRP	
NDRETRY	
NPRETRY	
PAD=NO	Required by all MPE/iX SNA products.
PKTMODL=8	Required by all MPE/iX SNA products.
PUNAME	
PWPROT	
SPAN	
SPEED	
SPNQLLC=NO	Required by all MPE/iX SNA products.
STATION	
STATOPT	
T1TIMER	
TDTIMER	
TPTIMER	
VMODTAB	
X25.LCG macro	
LCGN=*groupnumber*	Required by all MPE/iX SNA products.

PVC Parameters

Table 1-15 defines the NPSI parameters that are necessary to connect to a PVC. See the `Parameter Descriptions` at the end of this chapter or refer to the NPSI manual for the remote system for more information.

Table 1-15. MPE/iX SNA Products: PVC NPSI Parameters

Operands and Values	Comments
`X25.LINE macro`	
`COMMITO`	
`DSTNODE=BNN`	Required by all MPE/iX SNA products.
`ISTATUS`	
`LCN=`*nnnn*	Required by all MPE/iX SNA products.
`NCPGRP`	
`RETVCCT`	
`RETVCTO`	
`SPAN`	
`STATOPT`	
`TYPE=PERMANENT`	Required by all MPE/iX SNA products.
`VCCINDX`	Required by all MPE/iX SNA products.
`X25.PU macro`	
`ADDR=`*nnn*	Required by all MPE/iX SNA products.
`DLOGMOD`	
`IRETRY=YES`	
`MAXDATA`	
`MAXOUT=7`	
`MODETAB=HPMODTAB`	
`PASSLIM=7`	
`PUTYPE=2`	Required by all MPE/iX SNA products.
`STATUS=ACTIVE`	
`XID=YES`	
`X25.LU macro`	
`LOCADDR=`*locaddr*	Required by all MPE/iX SNA products.
`ISTATUS`	
`DLOGMOD`	

SVC Parameters

There are two methods that can be used to define an SVC:

- Use the X25.LINE macro, the X25.PU macro, and the Switched Major Node parameters for SVCs.
- Use the X25.VC macro and the Switched Major Node parameters for SVCs.

The method chosen depends upon the remote system. See the `Parameter Descriptions` at the end of this chapter or refer to the NPSI manual for the remote system for more information.

Table 1-16 defines the NPSI parameters that are necessary to connect to an SVC. Table 1-17 defines the Switched Major Node parameters for SVCs.

For MPE/iX SNA products, more than one PU may be defined for an HP 3000 node. A maximum of eight PUs can be defined for each HP 3000 node. The number of PUs defined depends upon the number of SNA Link products installed.

A maximum of 64 LUs can be configured for each HP 3000 PU. For SNA NRJE/V, it is recommended that at least three LUs be defined. SNA IMF can support a maximum of 64 LUs. The LU 6.2 products can start a maximum of eight LUs. See the MPE/V SNA product documentation for more information on configuration requirements.

Table 1-16. MPE/iX SNA Products: SVC NPSI Parameters

Operands and Values	Comments
X25.LINE macro	
LCN=*ennn*	Required by all MPE/iX SNA products.
TYPE=SWITCHED	Required by all MPE/iX SNA products.
OUFINDX	Required by all MPE/iX SNA products.
LLC=LLC3	Required by all MPE/iX SNA products.
VCCINDX=*index*	Required by all MPE/iX SNA products.
CALL=IN	Required by all MPE/iX SNA products.
DSTNODE=BNN	Required by all MPE/iX SNA products.
COMMITO	
ISTATUS	
NCPGRP	
RETVCCT	
RETVCTO	
SPAN	
STATOPT	
X25.PU macro	
PUTYPE=2	Required by all MPE/iX SNA products.
X25.VC macro	
LCN=*nnn*	Required by all MPE/iX SNA products.
TYPE=SWITCHED	Required by all MPE/iX SNA products.
OUFINDX=*index*	Required by all MPE/iX SNA products.
VCCINDX=*index*	Required by all MPE/iX SNA products.
CALL=IN	Required by all MPE/iX SNA products.
COMMITO	
ISTATUS	
NCPGRP	
RETVCCT	
RETVCTO	
SPAN	
STATOPT	

Table 1-17. MPE/iX SNA Products: SVC Switched Major Node

Operands and Values	Comments
VBUILD macro	
TYPE=SWNET	Required by all MPE/iX SNA products.
PU macro	
puname pu	Required by all MPE/iX SNA products.
ANS	
IDBLK=023	Required for LU 6.2 API/iX, SNA NRJE/iX, and HP SNADS/iX.
IDBLK=017	Required for SNA IMF/iX and SNA DHCF/iX IBM 3274 emulation.
IDBLK=018	Required for SNA IMF/iX and SNA DHCF/iX IBM 3276 emulation.
IDNUM=*n*	Required by all MPE/iX SNA products.
DISCNT=NO	
ISTATUS	
MAXLU	
MAXDAT	
MAXPATH	
PASSLIM	
PUTYPE=2	Required by all MPE/iX SNA products.
SRT	
PATH macro	
USE	
DIALNO=[*HP net addr*] [*IBM net addr*] [*pi*] [*VCCINDEX*] [*OUFIDX*]	Required by all MPE/iX SNA products.
GRPNM	
PID	

Table 1-17. MPE/iX SNA Products: SVC Switched Major Node (cont.)

Operands and Values	Comments
LU macro	
luname LU	Required by all MPE/iX SNA products.
LOCADDR=*address*	Required by all MPE/iX SNA products.
BATCH=YES	Recommended for SNA NRJE/iX on applicable versions of ACF/NCP. This parameter is not supported for ACF/NCP version 5 or later.
DLOGMOD	Do not specify for SNA DHCF/iX.
ISTATUS	
MODTAB=HPMODTAB	Do not specify for SNA DHCF/iX.
PACING=0	Specify for SNA IMF/iX.
SSCPFM=FSS	Required by LU 6.2 API/iX, HP SNADS/iX, and SNA NRJE/iX.
SSCPFM=USSSCS	Required by SNA IMF/iX and SNA DHCF/iX.
VPACING=0	Recommended for SNA IMF/iX keyboards and displays.
USSTAB	Valid for SNA IMF/iX only. Do not specify for SNA NRJE/iX, SNA DHCF/iX or LU 6.2 products.
LOGAPPL	Valid for SNA IMF/iX only. Do not specify for SNA NRJE/iX, SNA DHCF/iX or LU 6.2 products.

Logmode Table Requirements

The Logmode table definitions determine the operating characteristics of the session with a host LU—the bind parameters. The tables in this section define the Logmode table parameters necessary for MPE/iX SNA products.

Tables 1-18, 1-19, and 1-20 contain Logmode table parameters required for SNA NRJE/iX for the JES2, JES3, and POWER job entry subsystems. Table 1-21 contains the Logmode table parameters required for SNA IMF/iX. Table 1-22 contains the Logmode table parameters required for SNA DHCF/iX. Table 1-23 contains the Logmode table parameters for non-SNA devices connected to HCF. Table 1-24 contains the Logmode table parameters required for the LU 6.2 products, LU 6.2 API/iX and HP SNADS/iX.

Table 1-18. SNA NRJE/iX: JES2 Logmode Table

Required Parameters	Values (hexadecimal)	Comments
COMPROT	7080	Required value.
FMPROF	03	Required value.
LOGMODE	MODENRJE	Suggested value.
PSNDPAC	3	Suggested value.
PRIPROT	B1 or B3 B3	Required value.
PSERVIC	01102000F100C00000010040	Suggested value.
RUSIZES*	8585	Required value.
SECPROT	A3	Suggested value.
SSNDPAC	3	Suggested value.
SRCVPAC	3	Suggested value.
TSPROF	03	Required value.

* See Parameter Descriptions at the end of this chapter for an explanation of RUSIZES values.

Table 1-19. SNA NRJE/iX: JES3 Logmode Table

Required Parameters	Values (hexadecimal)	Comments
COMPROT	7080	Required value.
FMPROF	03	Required value.
LOGMODE	MODENRJE	Suggested value.
PSNDPAC	3	Suggested value.
PRIPROT	A1, A3, B1, or B3	Required value.
PSERVIC	01102000F100C00000010040	Suggested value.
RUSIZES*	8686	Required value.
SECPROT	A1 or A3	Required value.
SSNDPAC	3	Suggested value.
SRCVPAC	3	Suggested value.
TSPROF	03	Required value.

* See Parameter Descriptions at the end of this chapter for an explanation of RUSIZES values.

Table 1-20. SNA NRJE/iX: POWER Logmode Table

Required Parameters	Values (hexadecimal)	Comments
COMPROT	7080	Required value.
FMPROF	03	Required value.
LOGMODE	MODENRJE	Suggested value.
PSNDPAC	3	Suggested value.
PRIPROT	A3 B3	Required value.
PSERVIC	01102000F100C00000010040	Suggested value.
RUSIZES*	8585	Required value.
SECPROT	A1	Required value.
SSNDPAC	3	Suggested value.
SRCVPAC	3	Suggested value.
TSPROF	03	Required value.

* See Parameter Descriptions at the end of this chapter for an explanation of RUSIZES values.

Table 1-21. SNA IMF/iX: Logmode Table

Required Parameters	Values (hexadecimal)	Comments
COMPROT	3080	Required value.
FMPROF	03	Required value.
LOGMODE	IMFLU1 for LU.T1 IMF1920 for LU.T2 with 1920 size screen IMF480 for LU.T2 with 480 size screen IMF3440 for LU.T2 with 3440 size screen IMFLU3 for LU.T3	Suggested value.
PSNDPAC	3	Suggested value.
PRIPROT	11, 21, 31, A1, or B1	Required value.
PSERVIC	Printer (LU.T1): 01000000E100000000000000 Terminal (LU.T2) and screen size of 1920 (24 x 80): 020000000000000000000200 020000000000185000007E00 020000000000185018507F00 Terminal (LU.T2) and screen size of 480 (12 x 40): 0200000000000C2800007E00 0200000000000C280C287F00 Terminal (LU.T2) and screen size of 3440 (43 x 80): 0200000000002B5000007E00 0200000000002B502B507F00 Printer (LU.T3): 030000000000000000000200	Suggested value.

Table 1-21. SNA IMF/iX: Logmode Table (cont.)

Required Parameters	Values (hexadecimal)	Comments
RUSIZES*	Must be 8989 or less. 8587–LU.T1 Printer 8989–LU.T2 Terminal	Suggested value.
SECPROT	90 (LU.T1/T3 printer), A0, or B0 (LU.T2 display station)	Required value.
SSNDPAC	3–LU.T1 and LU.T3 printers 0–LU.T2 terminals	Suggested value.
SRCVPAC	3	Suggested value.
TSPROF	03	Required value.

* See Parameter Descriptions at the end of this chapter for an explanation of RUSIZES values.

Note

Table 1-22 shows the logmode definitions for IBM 3270 terminals. The logmode entries defined for HP 3000 LUs are not used with SNA DHCF/iX.

Table 1-22. SNA DHCF/iX: Logmode Table

Required Parameters	Values (hexadecimal)	Comments
COMPROT	3080	Required value.
FMPROF	03	Required value.
LOGMODE	DHCF1920 for 1920 size screen DHCF2560 for 2560 size screen DHCF3440 for 3440 size screen	Suggested values. dP12D4A3278 may be used for Model 2 devices.
PRIPROT	B1	Required value.
PSERVIC	Screen size of 1920 (24 x 80): 020000000000185000007E00 Screen size of 2560 (32 x 80): 020000000000205000007E00 Screen size of 3440 (43 x 80): 0200000000002B5000007E00	Suggested values.
RUSIZES*	87C7	Suggested value.
SECPROT	90 or B0	Required value.
TSPROF	03	Required value.

* The value specified must be at least 88 (hex B3B3) but no larger than 4096 (hex 8989). See Parameter Definitions at the end of this chapter for an explanation of RUSIZES values.

Table 1-23. Non-SNA HCF Devices: Logmode Table

Required Parameters	Values (hexadecimal)	Comments
COMPROT	2000	Required value.
FMPROF	02	Required value.
LOGMODE		D4B32782, the standard IBM-supplied logmode entry for non-SNA or BSC Model 2 devices, may be used.
PRIPROT	71	Required value.
PSERVIC	Screen size of 1920: 000000000000185000007E00	Suggested value.
RUSIZES*	A8A8	Suggested value.
SECPROT	40	Required value.
TSPROF	02	Required value.

* The value specified must be at least 88 (hex B3B3) but no larger than 4096 (hex 8989). See Parameter Definitions at the end of this chapter for an explanation of RUSIZES values.

Table 1-24. MPE/iX LU 6.2 Products: Logmode Table

Required Parameters	Values (hexadecimal)	Comments
LOGMODE	MODE62	Suggested value.
PSERVIC	000000000000000000000000	Suggested value.
PSNDPAC	3 for LU 6.2 API/iX 3 for HP SNADS/iX	Suggested value.
SSNDPAC	0	Suggested value.
SRCVPAC	0	Suggested value.

Note

The values in table 1-24 are for node type 2.0 (T2.0) only. For T2.1 LUs (that is, independent LUs), the actual logmode value is not important, as long as the logmode is a valid one.

Parameter Descriptions

ACF/NCP and ACF/VTAM Macro and Operands Descriptions

This section describes the ACF/NCP and ACF/VTAM operands for the LUDRPOOL, GROUP, LINE, SERVICE, VBUILD, PU, and LU macros. This section contains generic descriptions of the macros and operands. Refer to the tables earlier in this chapter for operand values that are specific to the configuration of the HP SNA products. See the NCP or VTAM manual for the remote system for a more thorough explanation of the parameters and their values.

The GROUP macro can contain all of the operands of the LINE, PU, and LU macros that are allowed to be defined at a higher level. This results in a "shift-down" effect of these operands to the LINE, PU, and LU macros defined below it. The operands could have also been defined on the lowest level macro allowed. The resulting VTAM/NCP configuration is identical using either method. The placement of operands in higher level macros saves time and space when trying to determine which operands affect which macros.

LUDRPOOL

This macro defines a pool of LU control blocks for switched lines.

`NUMTYP2` Specifies the number of LUs to be included in the LU pool for type 2 PUs.

GROUP

This macro specifies certain common characteristics and functions for a group of links and devices.

`DIAL` Specifies whether switched or nonswitched protocols are invoked. **NCP parameter**

Default: `NO`

Range: `YES,NO`

`LNCTL` Indicates the line control protocol used. **NCP parameter**

Default: `SDLC` if `LNCTL=SDLC` is specified in a preceding GROUP macro

Range: `SS,BSC,SDLC`

`REPLYTO` Specifies the response time-out value for all the lines in the group. If no response is received from the station by the time specified, a time-out error is indicated and NCP makes no further attempt to communicate. **NCP parameter**

Default: `1.0`

Range: `0–1632`

Note Network delays must be considered when specifying `REPLYTO`.

TEXTTO — Specifies the time-out value between characters in a message. If the time between characters exceeds this value, the NCP ends the read or write operation with a text time-out error. **NCP parameter**

Default: 3.0

Range: 0–1632

TYPE — Specifies the mode in which the lines in the group operate. **NCP parameter**

Default: NCP

Range: EP,NCP,PEP

LINE

This macro defines a communications link to the host.

ADDRESS — Specifies the physical location of the line interface hardware on the line interface base (LIB) and the type of scanner. For SDLC links, *line address* is the communications controller address to which the line is attached. **NCP parameter**

Range: 0–255

SPEED — Specifies the data rate in bits per second. **NCP parameter**

Range: 0–56000

CALL — Specifies whether the line is to be used for incoming (to the host) calls, outgoing (from the host) calls, or both incoming and outgoing calls. **VTAM parameter (switched only)**

Default: IN

Range: IN,OUT,INOUT

CLOCKNG — Specifies the device that provides clocking for the line. **NCP parameter**

Default: EXT

Range: INT, EXT

DATRATE — Specifies the high or low rate for a dual-rate modem. This operand must *not* be coded for modems that have only one data rate. **NCP parameter**

Default: LOW

Range: HIGH,LOW

DUPLEX — Specifies the type of communication facility constituted by the communication line and modem. **NCP parameter**

Default: HALF

Range: FULL,HALF

ETRATIO — Specifies the error-to-transmission ratio for programs that analyze statistical maintenance records. **NCP parameter**

Default: 30

Range: 1–255

HDXSP — Specifies whether the NCP has priority over polling when sending data. **NCP parameter**

Default: NO

Range: YES,NO

LPDATS — Specifies whether modems support LPDA commands. **NCP parameter**

Default: NO

Range: YES,LPDAT1,[LPDATA1,3867],LPDA2

MAXPU — Specifies the maximum number of PUs that may be defined on this line. Value must be at least equal to the number of PUs defined. Coding this operand is not necessary unless dynamic reconfiguration is used. **NCP parameter**

Default: The number of PUs defined.

Range: 1–255

NRZI — Specifies whether equipment at the end of the SDLC link operates in Non-Return-to-Zero-Inverted mode. **NCP parameter**

Default: YES

Range: YES,NO

PAUSE — Specifies the average duration of the polling cycle. **NCP & VTAM parameter**

Default: .2,2.8

POLLED — POLLED=YES is required for a PU type 2 for ACF/NCP version 1 release 2.1 and earlier releases. The operand is invalid for an SDLC line for ACF/NCP version 1 release 3, and later releases. **NCP parameter**

Default: See the NCP manual for the release.

RETRIES — Specifies the number of times to retransmit a frame. **NCP parameter**

Default: 7

Range: See the NCP manual for the remote system.

RING — Not applicable in the U.S. and Canada. See the NCP installation manual for the remote system for details. **NCP parameter (switched only)**

Default: NO

Range: YES,NO

SERVLIM — Specifies the maximum number of scans of the service order table. **NCP parameter (non-switched only)**

Default: 4

Range: 1–255

SPDSEL — Specifies whether VTAM is allowed to change the data rate of the modem. SPDSEL=YES is valid only if CLOCKNG=EXT. **NCP parameter**

Default: NO

Range: YES,NO

TRANSFR — See the ACF/NCP installation manual for the remote system for restrictions. **NCP parameter**

OWNER — Used for the division of resources within VTAM. See the NCP/VTAM manual for the remote system. **VTAM parameter**

SERVICE

This macro creates a service order table for non-switched lines. Service order refers to the order in which devices on the line are serviced by the scanner. The SERVICE macro is invalid for switched lines.

ORDER — Each entry is the name of a station (the label of the PU macro).

MAXLIST — The value of MAXLIST specifies the maximum number of table entries. The default is the number of entries specified with the ORDER operand.

VBUILD

This macro is coded for all VTAM switched major nodes. One VBUILD macro must be included in each VTAMLST member that defines a switched major node. The VBUILD macro must be placed before the first PU macro.

TYPE — TYPE=SWNET defines a switched major node to VTAM. **VTAM parameter**

PU

This macro defines variables associated with data link control, such as the station address and link buffer size, and other variables, such as initial status and Exchange ID (XID).

puname PU — A symbolic name for this PU. The PU name consists of one to eight characters; it must be unique throughout the network.

ADDR — Specifies the hexadecimal representation of the address (STATION ID) of the secondary SDLC device. On a switched line, this operand must appear in the member in which the VBUILD macro is defined. **NCP and VTAM parameter (non-switched only)**

Range: 01–FE

IDBLK — Specifies the hexadecimal value given to a specific device type. This value is part of the network address assigned to this station. **VTAM parameter (switched only)**

IDNUM — Specifies the hexadecimal number assigned to this station. The combination of IDBLK and IDNUM must form a network unique station identifier. **VTAM parameter (switched only)**

Range: 00000–FFFFF

ANS — Specifies whether the station stops or continues when the ACF/NCP goes into automatic network shutdown. **NCP parameter**

Default: STOP

Range: STOP,CONTINUE,CONT

DISCNT — Specifies that the PU-SSCP session is to terminate after the last LU-LU session logs off. **VTAM parameter**

Default: NO

Range: YES, NO

ISTATUS — Specifies whether automatic activation of this PU occurs when ACF/VTAM is started. **VTAM parameter**

Default: ACTIVE

Range: ACTIVE, INACTIVE

IRETRY — Specifies whether the NCP services the next device polled or immediately retries when an idle-detect time-out condition follows a polling operation. **NCP parameter**

Default: NO

Range: YES, NO

MAXDATA — Specifies the maximum frame size (in bytes) allowed in one data transfer on the link. For a type 2.0 and type 2.1 node, this includes 3 bytes for the RH, and 6 bytes for the TH. This value depends on the network card installed on the HP system. For NCP version 5, release 2 and later releases, the MAXDATA parameter does not need to be coded for PU 2.1 nodes. **NCP parameter (non-switched only)**

Range: 0–65535

MAXLU — Specifies the maximum number of LUs that may be associated with this PU. Default is the value of MAXLU operand of the PUDRPOOL or the number of LUs defined for this PU, whichever is greater. **NCP parameter (for switched lines and dynamic reconfiguration only)**

MAXOUT — Specifies the maximum number of frames the NCP sends to this PU before requesting a response. **NCP parameter (non-switched only)**

Range: 1–7

PASSLIM — Specifies the maximum number of PIUs sent from the host to a PU before the host services another PU. **NCP parameter (non-switched only)**

Default: 1

Range: 1–254

PUTYPE — Specifies the physical unit type of this PU. **NCP parameter**

RETRIES — Specifies the number of attempts to recover. **NCP parameter (non-switched only)**

Default: 7

Range: See the NCP manual for the remote system.

SRT — Specifies threshold values for the total number of transmissions and the total number of error retries for this PU. **NCP parameter**

Default: (32768,32768)

Range: 1–32768

XID — Specifies whether or not the host sends an XID to the remote PU. For type 2.1 node operation, XID must be set to YES. **NCP parameter**

Range: YES, NO

LU

There must be an LU definition for each LU associated with a PU. An LU macro must be coded for each IBM 3270 emulation device attached to an IBM 3270 service. For example, emulation of an IBM 3274 cluster controller with three IBM 3278 keyboard/displays and one IBM 3286 printer requires four separate LU macro statements.

luname LU — A symbolic name for this LU. The name consists of one to eight characters and must be unique throughout the network. *luname* is used by application subsystems, such as CICS, to specify a particular LU.

LOCADDR — Specifies the local address of the LU. This value should be set to 0 for independent LUs. **NCP parameter**

Range: 0–255

BATCH — Specifies the priority of the LU. A value of NO specifies a high priority (appropriate for interactive sessions). A value of YES specifies a low priority (appropriate for batch sessions). Note that this parameter is not supported on ACF/NCP version 5 or later. **NCP parameter**

Default: NO

Range: YES,NO

DLOGMOD — Specifies the name of the logmode table entry that corresponds to the LU you are configuring. Refer to "Logmode Table Definitions" in this section. **VTAM parameter**

Default: First entry in the logmode table

ISTATUS — Specifies whether this LU is automatically activated when the major node it is associated with is started. **VTAM parameter**

Default: ACTIVE

Range: ACTIVE,INACTIVE

LOGAPPL — Specifies the application program that the terminal is automatically logged on to when activated. The program name is from one to eight alphanumeric characters. **VTAM parameter**

MODTAB — Specifies the name of the logmode table that contains the LU's logmode entry. Refer to "Logmode Table Definitions" in this section. **VTAM parameter**

Default: IBM supplied table, ISTINCLM

PACING — Specifies two values, represented by m and n. The value m specifies in which segment the pacing indicator (PI) is to be turned on. The value n specifies the number of PIUs or PIU segments that can be sent before waiting for a pacing response. **NCP parameter**

Default: (1,1)

Range: 0–255

SSCPFM — Specifies whether an LU can support character-coded messages, or only formatted commands for communication with the SSCP. **VTAM parameter**

Default: FSS

Range: FSS,USSSCS

VPACING — Specifies pacing between NCP and host on a specific LU-LU session. **VTAM parameter**

Default: 1

Range: 0–63

USSTAB — Specifies the unformatted system services (USS) table that VTAM uses to translate character-coded requests. This parameter must be specified only at the LU macro level. **VTAM parameter**

Default: an IBM USS table, ISTINCDT, is searched

NTRI Macro and Operand Descriptions

This section describes the NCP macros and operands listed in the preceding tables for NTRI configuration. This section contains generic descriptions of NCP macros and operands required for NTRI. Refer to the tables earlier in this chapter for operand values that are specific to the configuration of HP SNA products. See the Network Control Program Resource Definition documentation for the remote system for a more thorough explanation of the parameters and their values.

Note NTRI is not supported with any MPE/V SNA products.

GROUP

This macro specifies certain common characteristics and functions for a group of links and devices.

COMPSWP=NO
COMPSWP=YES — Specifies whether the control block structure used in user-written line control, user-written code, or IBM special products is compatible with the NCP control block structure. Compatible control block structure allows port swapping of the lines that are controlled by IBM special products or user-written code. For NCP version 5, release 2.1 and earlier, COMPSWP=NO should be specified for NTRI resources.

Default: COMPSWP=NO

DIAL=NO
DIAL=YES — Specifies whether the lines in the group require switched line control procedures. For generation of NTRI *physical* connections, DIAL=NO must be specified. For generation of NTRI *logical* connections, DIAL=YES must be specified.

`ECLTYPE=(PHYSICAL, PERIPHERAL)`
`ECLTYPE=(LOGICAL, PERHIPHERAL`

Specifies whether this `GROUP` definition statement defines a physical or a logical connection to the token ring. At least one *physical* connection must be coded in a `GROUP` definition statement to define the token-ring interface coupler (TIC). At least one *logical* connection must be coded in a `GROUP` definition statement to define the devices attached to the token ring.

`LNCTL=SDLC`

Specifies the line control for lines in the group.

Range: `SS, BSC, SDLC, CA, USER`

`PHYPORT=`*n*

Specifies the physical port address or TIC with which the logical lines in the group communicate. The value must match the value coded for `PORTADD` in the `LINE` definition.

Range: `0–99`

`TYPE=NCP`

Specifies that lines in the group operate in network control mode. `TYPE=NCP` must be specified to include NTRI resources in the generation.

LINE

This macro defines a communications link to the host.

`ADAPTER=TIC1`
`ADAPTER=TIC2`

Specifies which type of token-ring adapter (type 1 or type 2) is attached to the NTRI physical line.

Default: `TIC1`

`ADDRESS=`*lnbr*`, FULL`

Specifies the relative line number and data transfer mode for the line represented by the `LINE` definition. For NTRI physical line definition, `FULL` must be specified.

`LOCADD=n`

Specifies the locally-administered address for the TIC. `LOCADD` is required for physical line definition. The format for *n* is 4000*abbbbbbb*, where *a* is a number between 0–7 and *b* is a number between 0–9.

`PORTADD=`*n*

User-assigned value that associates an NTRI physical line with its corresponding logical line. The same value must be specified for `PHYPORT` in the logical line definition.

`RCVBUFC`

Specifies the NTRI buffer.

Default: 1440

NPSI Macro and Operand Descriptions

This section describes the NPSI macros and operands listed in the preceding tables. This section contains generic descriptions of NPSI macros and operands. Refer to the tables earlier in this chapter for operand values that are specific to the configuration of HP SNA products. See the *X.25 Network Control Program Packet Switching Interface* manual for the remote system for a more thorough explanation of the parameters and their values.

Note NPSI is not supported with any MPE/V SNA products.

BUILD

The BUILD macro starts the generation process of control blocks, including those for X.25.

Note The BUILD parameters listed in this chapter are additional parameters required by X.25 NPSI. The list does not contain all parameters necessary for a complete BUILD statement.

`X25.MAXPIU` Specifies the maximum inbound Path Information Unit (PIU) length. Can be coded in bytes or kilobytes.

Default: `64K`

Range: (in kilobytes) `2K–64K`, (in bytes) `1296–65535`

`X25.MWINDOW` Specifies the frame window size used by Link Access Protocol Balanced (LAPB).

Default: None

Range: (decimal) `1–7`

`X25.PREFIX` Specifies the first letter that will be used for X.25 NPSI default resource names.

Default: `X`

Range: `A–X`

`X25.SNAP` Specifies whether the SNAP trace facility is turned on during system generation.

Default: `NO`

Range: `YES`, `NO`

`X25.USGTIER` Specifies the usage tier of the operations of the X.25 NPSI level module. Value must be less than or equal to the usage tier installed with the remote system. Refer to the IBM licensing agreement to determine the usage tier installed.

Default: `1`

Range: (decimal) `1–5`

X25.NET

The X25.NET statement describes a Packet Switched Data Network. Each PSDN connected to the host must be described by a separate X25.NET statement. Up to nine X25.NET statements may be specified.

`DM` Specifies whether the Packet Switched Data Network (PSDN) receives or sends the LAPB DM command. Note that the DM command is not supported by all PSDNs.

Default: None

Range: `YES`, `NO`

`CPHINDX` Specifies the highest index value coded for the X25.VCCPT statements in this NPSI generation.

Default: `1`

Range: `1`–`99`

`NETTYPE` Specifies the network type in terms of the RESET commands that are exchanged.

`NETTYPE=1`. When X.25 NPSI receives a RESET 07, it stops sending physical services commands to the remote DTE until it receives a RESET 00, 09, or 0F.

`NETTYPE=3`. When X.25 NPSI receives a RESET 07, it continues sending physical services commands to the remote DTE, because a network defined as type 3 (DDX-P) does not compensate a RESET 07 by a RESET 09.

Default: `1`

Range: `1`, `3`

`OUHINDX` Specifies the highest index value coded for any X25.OUFT statement within this NPSI generation.

Default: `1`

Range: `01`–`99`

X25.VCCPT

The X25.VCCPT statement defines the connection parameters for one or more virtual circuits. One statement is required for each entry in the virtual circuit connection parameter table. Up to 99 can be coded.

`INDEX` Specifies an index number to an entry in the Virtual Circuit Connection Parameter Table. Must correlate to the `VCCINDX` keyword of the X25.LINE statement.

Default: None

Range: `1`–`99`

`MAXPKL` Specifies the maximum length of the data in the packets to be sent or received over the virtual circuits associated with this X25.VCCPT entry.

Default: None

Range: 32, 64, 128, 256, 512, 1024, 2048, 4096

INSLOW — Specifies the percentage of free buffers that must be used before entering unsafe or danger conditions for the virtual circuits associated with this VCCPT entry. When this keyword is coded, two percentages must be supplied, separated by a comma.

Percentage 1—the unsafe percentage

Percentage 2—the danger percentage

These values are not absolute; they are defined in relation to the value of the NCP SLODOWN keyword. For example, coding INSLOW=(12,6) means that the unsafe buffer use level is 12 percent higher than the value of SLODOWN and the danger buffer use level is 6 percent higher than the value of SLODOWN. The unsafe percentage must be greater than the danger percentage.

Default: (50,12)

Range: 0, 6, 12, 25, 50, 100

VWINDOW — Specifies the size of the transmit or receive window for the virtual circuits indexed to this VCCPT entry. The value specified must be less than the packet modulo value defined in the X25.MCH statement.

Default: 2

Range: 1–127

X25.OUFT

The X25.OUFT statement specifies the user facilities and call user data that will be included in the Call Request Packet for an outgoing call. No X25.OUFT statement is required for Permanent Virtual Circuits. At least one X25.OUFT statement is required for each NPSI generation that defines Switched Virtual Circuits.

INDEX — Identifies the entry in the optional user facilities table. This index number is used in the TYPE keyword of the X25.LINE statement to reference the facility set to be used on the line.

Default: None

Range: 1–99

X25.MCH

The X25.MCH statement describes a physical circuit (serving one or more virtual circuits) to X.25 NPSI.

ADDRESS — Specifies the full duplex line interface address. Code one to three decimal digits.

Default: N/A

Range: 0–63 (for 3720), 0–511 (for 3745)

FRMLGTH — IBM requires that the value specified for FRMLGTH equal the MAXPKL (see X25.VCCPT macro) size plus 3 bytes for the modulo 8 X.25 packet header. (HP supports modulo 8 only). IBM's FRMLGTH does not equal the X.25 N1 parameter divided by 8.

Note that this value will not be the same as the `Frame Size` value in the HP DTC configuration. HP DTC configuration interprets `Frame Size` to equal the value of the X.25 N1 parameter divided by 8, which is the sum of the data packet size plus 3 bytes for the packet header and 4 bytes for the LAP-B header and LAP-B trailer.

HP's `Frame Size` value reflects the maximum frame length in bytes flowing over the physical circuit.

Default: None

Range: `35–4100`

`LCGDEF` Specifies the highest logical channel number for each logical channel group defined. Values are defined in pairs, as follows:

`LCG`—specifies the number of the LCG

`LCGI`—specifies the highest number for that LCG

Default: N/A

Range: Refer to `LCGN` operand of the X25.LCG statement

`MWINDOW` Specifies the frame window size to be used by X.25 link access protocol level 2.

Default: None

Range: `1–7`

`ANS` Specifies whether the station is to stop or continue when ACF/NCP goes into automatic network shutdown.

Default: None

Range: `[CONT]INUE, STOP`

`CONNECT` Specifies whether X.25 NPSI fast connect is to be used on this physical circuit.

Default: `NO`

Range: `YES, NO, CUDO, SUBD`

`DBIT` Specifies whether the deliver confirmation bit should be used. Used for non-SNA DTEs.

Default: `NO`

Range: `YES, NO`

`DIRECT` Specifies whether the physical circuit described by this MCH is directly attached to a communications controller, or a peripheral node.

Default: `NO`

Range: `YES, NO`

`DSABLTO` Specifies the delay during which the DTE expects DSR to be dropped after the disable command is issued.

Default: `3.0` seconds

Range: 0.1–1632.0 seconds (specified in tenths of a second)

ENABLTO — Specifies the maximum delay during which the DTE expects the DSR signal to come up after the enable command is issued.

Default: 3.0 seconds

Range: 0.1–1632.0 seconds (specified in tenths of a second)

GATE — Specifies whether the physical circuit supports General Access to X.25 Transport Extended (GATE), or Dedicated Access to X.25 Transport Extended (DATE).

Default: NO

Range: NO, DEDICAT GENERAL

SUBADDR — Specifies whether the incoming call packets use subaddressing to select LLC types.

Code SUBADDR=YES to select subaddressing. If YES is coded, you must also specify the subaddresses by coding the LLC3 keyword, explained below.

Code SUBADDR=NO for no subaddressing. Specifies that subaddressing is not used.

Default: NO

Range: YES, NO

LLC3 — Specifies the value of the subaddress field of the Incoming Call packets for SNA peripheral nodes communicating with the BNN QLLC protocol. This keyword must be coded if SUBADDR=YES.

Range: 0–9

ISTATUS — Specifies whether the NPSI physical circuit, LU, and PU will automatically activate when the NCP is activated.

Default: None

Range: ACTIVE, INACTIVE

ITRACE — Specifies whether the Link Access Protocol (LAP) internal trace facility is to be performed on this physical circuit.

Default: YES

Range: YES, NO

LCNO — Specifies whether logical channel 0 of logical group 0 is used to designate a virtual circuit. If you specify USED (the default), LCN=0 must be coded in a subsequent X25.LINE or X25.VC statement.

Default: USED

Range: USED, NOTUSED

LLCLIST — Specifies the types of SVCs that are supported. LLCLIST must be coded if SVCs are to be configured on this physical circuit. LLCLIST can be coded with multiple values separated by commas, as in LLCLIST=(LLC0,LLC3,LLC4).

The value LLC3 signifies that multiple SVCs can connect to an SNA peripheral node using the QLLC protocol.

Default: None

Range: LLC0, LLC2, LLC3, LLC4, LLC5

NCPGRP — Specifies the label of the NCP GROUP statement that includes this physical circuit. Omitting this keyword, or specifying NEW causes a label to be created by X.25 NPSI. If you specify a label, an NCP GROUP statement is generated with a name matching the label.

Default: NEW

Range: label, NEW

NDRETRY — Specifies how many times the NP/TP sequence is executed.

Default: 1

Range: 1–3

NPRETRY — Specifies the number of transmissions of an I or U frame in a TP time out recovery.

Default: 7

Range: 3–31

OWNER — Specifies the value of the OWNER parameter on the NCP LINE statement generated by this X25.MCH statement.

PAD — Specifies how PAD-supported terminals are attached.

Default: NO

Range: INTEG, TRANSP, NO

PKTMODL — Specifies the packet protocol modulo. You must specify a value higher than the VWINDOW values coded for the X25.VCCPT statements associated with this MCH.

Default: 8

Range: 8, 128

PUNAME — Specifies the PU name associated with this physical circuit.

PWPROT — Specifies whether the physical circuit supports password protection for its associated virtual circuits.

Default: NO

Range: YES, NO

SPAN — Specifies restricted access to this MCH for NetView operators. Refer to the appropriate NetView documentation for more information.

SPEED — Specifies the physical circuit's data rate in bits per second.

Default: 9600

SPNQLLC — Specifies whether an SDLC PAD is used to connect this physical circuit.

Default: NO

Range: YES, NO

STATION — Specifies whether the MCH operates as a DTE or a DCE. The value DTE must be used to support a normal connection to a network node.

Default: DTE

Range: DCE, DTE

STATOPT — This keyword is used by Netview. Refer to the appropriate NetView documentation for more information.

T1TIMER — Specifies how many seconds the DCE waits for frame acknowledgment. Note that the value of 0 does not allow for link-level piggybacking. Can be specified in tenths of a second.

Default: 0

TDTIMER — Specifies the value of the X.25 NPSI internal delay timer between ND transmissions.

Default: 1

Range: 1, 2, 3

TPTIMER — Specifies the value of the X.25 T1 timer. This timer determines the maximum delay during which the DTE expects the acknowledgment of a transmitted I or U frame with or without the poll bit set, or of a transmitted S frame with the poll bit set.

Default: 1.0 second

Range: 0.5–25.5 seconds (in .1 second increments)

VMODTAB — Specifies the name of the mode table for the virtual circuit LUs defined in the X25.FCG statements that correspond to this X25.MCH statement.

X25.LCG

LCGN — Specifies the logical group number for all virtual circuits specified by subsequent X25.VC or X25.LINE statements. Code in decimal, in ascending order.

Default: None

Range: 0–15

X25.VC

The X25.VC macro causes a LINE, a PU, and LU macros to be generated for each logical channel defined in the LCN operand.

LCN — Specifies the logical channel number used by the virtual circuits. If LCN0=USED is specified in the X25.MCH statement, then LCN=0 must be used.

Default: None

Range: 0–255 (Note that some networks do not use the value 0).

TYPE

Specifies whether this X25.VC statement defines a switched virtual circuit (SVC) or a permanent virtual circuit (PVC).

Code TYPE=SWITCHED to define an SVC. If you code this value, you must also code the OUFINDX keyword, which points to the X25.OUFT entry that name the facility set you wish to use for this line.

Code TYPE=PERMANENT to define a PVC. If you code this value, you must also code the LLC keyword, which specifies the type of PVC being defined.

Default: None

Range: SWITCHED, PERMANENT

OUFINDX

Specifies the index value of the entry in the Optional Facility Set Table that creates the facility field and the end of the CUD field in the Call request packet. This keyword must be specified if TYPE=SWITCHED. This value must correlate to the value of the appropriate INDEX keyword of the X25.OUFT statement.

VCCINDX

Specifies the X25.VCCPT statement that describes the connection parameters to be used by this virtual circuit. This value must match the X25.VCCPT index value of the table with the desired connection parameters.

Default: N/A

Range: 1–99

CALL

Specifies whether an SVC is established through an incoming request or an outgoing request, or through either type of request.

CALL=IN specifies that the SVC is to be established at the request of a remote DTE.

CALL=OUT specifies that the SVC is to be established at the request of the host.

CALL=INOUT specifies that the SVC can be established by either method.

Default: IN

Range: OUT, IN, INOUT

COMMITO

Specifies the time interval that X.25 NPSI waits before decommitting buffers that were committed to this virtual circuit.

Default: 4

Range: 1, 2, 4, 8 (coded in seconds)

ISTATUS

Specifies the value of this keyword is used in the NCP LINE statement generated by X.25 NPSI.

Default: None

Range: ACTIVE, INACTIVE

NCPGRP

Specifies the label of the NCP GROUP statement that includes this virtual circuit. If you specify NEW, or do not specify this keyword, the label is generated by NDF.

Default: NEW

Range: N/A

`OWNER` Passes the OWNER parameter to the NCP LINE statement generated by this X25.VC statement.

Default: N/A

Range: N/A

`RETVCCT` Specifies how many times a physical services command is to be retransmitted. This keyword is used for virtual circuits connected to SNA DTEs.

Default: `3`

Range: `0–255`

`RETVCTO` Specifies the time interval between retransmissions of physical services commands. This keyword is only valid when the virtual circuit is associated with a DTE. Note that for an IBM 3710, you should configure a value greater than the time needed to perform recovery for a downstream device.

Default: `30`

Range: `0–255`

`SPAN` Specifies the access that the NetView operator has to this virtual circuit. Refer to the appropriate NetView documentation for more information.

`STATOPT` Used by the NetView program. Refer to the appropriate NetView documentation for more information.

X25.LINE

The X25.LINE macro can be used to specify each virtual circuit within a logical channel group within an MCH. Each X25.LINE macro allows the user to describe his own PU and LU characteristics using the X25.PU and X25.LU macros.

`LCN` Specifies the logical channel number used by the virtual circuits being defined. If `LCN0=USED` is specified in the X25.MCH statement, then `LCN=0` must be coded.

Default: None

Range: `0–255` (Note that some networks do not use the value `0`).

`TYPE` Specifies whether this X25.LINE statement defines a switched virtual circuit (SVC) or a permanent virtual circuit (PVC).

Code `TYPE=SWITCHED` to define an SVC. If you code this value, you must also code the `OUFINDX` keyword, which points to the X25.OUFT entry that name the facility set you wish to use for this line.

Code `TYPE=PERMANENT` to define a PVC. If you code this value, you must also code the `LLC` keyword, which specifies the type of PVC being defined.

Default: None

Range: `SWITCHED, PERMANENT`

`OUFINDX` Specifies the index value of the entry in the Optional Facility Set Table that creates the facility field and the end of the CUD field in the Call request

packet. This keyword must be specified if TYPE=SWITCHED. This value must correlate to the value of the appropriate INDEX keyword of the X25.OUFT statement.

LLC — Specifies the type of permanent virtual circuit defined. LLC=LLC3 means that the PVC is attached to an SNA peripheral node. This keyword must be specified if TYPE=PERMANENT.

VCCINDX — Specifies the X25.VCCPT statement that describes the connection parameters that this virtual circuit uses. This value must match the X25.VCCPT index value of the table with the desired connection parameters.

Default: N/A

Range: 1–99

CALL — Specifies whether an SVC is established through an incoming request or an outgoing request, or through either type of request.

CALL=IN specifies that the SVC is to be established at the request of a remote DTE.

CALL=OUT specifies that the SVC is to be established at the request of the host.

CALL=INOUT specifies that the SVC can be established by either method.

Default: IN

Range: OUT, IN, INOUT

DSTNODE — Specifies the type of destination node.

DSTNODE=BNN means that the destination node is a boundary node, such as a cluster controller or terminal.

DSTNODE=INN means that the destination node is defined as an INN node.

Default: BNN

Range: BNN, INN

COMMITO — Sets the time interval that X.25 NPSI waits before decommitting buffers that were committed to this virtual circuit.

Default: 4

Range: 1, 2, 4, 8 (coded in seconds)

ISTATUS — Specifies the value used in the NCP LINE statement generated by X.25 NPSI. ISTATUS controls whether the line automatically activates when the NCP is started.

Default: None

Range: ACTIVE, INACTIVE

NCPGRP — Specifies the label of the NCP GROUP statement that includes this virtual circuit. If you specify NEW, or do not specify this keyword, the label is generated by NDF.

Default: NEW

Range: N/A

`OWNER` Passes the `OWNER` parameter to the NCP LINE statement generated by this X25.LINE statement. The OWNER parameter is used to control the division of resources within VTAM.

Default: N/A

Range: N/A

`RETVCCT` Specifies how many times a physical services command is retransmitted. This keyword is used for virtual circuits connected to SNA DTEs.

Default: `3`

Range: `0–255`

`RETVCTO` Specifies the time interval between retransmissions of physical services commands. This keyword is only valid when the virtual circuit is associated with a DTE. Note that for an IBM 3710, you should configure a value greater than the time needed to perform recovery for a downstream device.

Default: `30`

Range: `0–255`

`SPAN` Specifies the access that the NetView operator has to this virtual circuit. Refer to the appropriate NetView documentation for more information.

`STATOPT` Used by the NetView program. Refer to the appropriate NetView documentation for more information.

X25.PU

The X25.PU macro defines a physical unit residing in an SNA DTE.

`PUTYPE` Specifies the PU type of the DTE.

Default: None

Range: N/A

`MAXDATA` Specifies the maximum bytes in a Path Information Unit (PIU)

Default: `265` is the default for PU.T2

X25.LU

This statement is used to define an LU.

`LOCADDR` Defines the local address of the LU. This value must be coded in decimal with no leading zeros.

Default: None

VBUILD

This macro is coded for all VTAM switched major nodes. One VBUILD macro must be included in each VTAMLST member. The VBUILD macro must be placed before the first PU macro.

`TYPE` `TYPE=SWNET` defines a switched major node to VTAM. **VTAM parameter**

PU

The PU macro defines variables associated with data link control, such as the station address and link buffer size, and other variables, such as initial status and Exchange ID (XID).

puname PU — A symbolic name for this PU. The PU name consists of one to eight characters; it must be unique throughout the network.

ANS — Specifies whether the station stops or continues when the ACF/NCP goes into automatic network shutdown. **NCP parameter**

Default: STOP

Range: STOP,CONTINUE,CONT

IDBLK — Specifies the hexadecimal value given to a specific device type. This value is part of the network address assigned to this station. **VTAM parameter (switched only)**

IDNUM — Specifies the hexadecimal number assigned to this station. The combination of IDBLK and IDNUM must form a network unique station identifier. **VTAM parameter (switched only)**

Range: 00000–FFFFF

DISCNT — Specifies that the PU-SSCP session is to terminate after the last LU-LU session logs off. **VTAM parameter**

Default: NO

ISTATUS — Specifies whether automatic activation of this PU occurs when the NCP is started. **VTAM parameter**

Default: ACTIVE

MAXDATA — Specifies the maximum frame size (in bytes) allowed in one data transfer on the link. For a PU type 2 this includes 3 bytes for the RH, and 6 bytes for the TH. This value depends on the network card installed on the HP system. **NCP parameter (non-switched only)**

Range: 0–65535

MAXLU — Specifies the maximum number of LUs that may be associated with this PU. Default is the value of MAXLU operand of the PUDRPOOL or the number of LUs defined for this PU, whichever is greater. **NCP parameter (for switched lines and dynamic reconfiguration only**)

MAXPATH — Specifies the maximum number of dial-out paths to the PU. Specify 0 if only dial-in paths to the PU are used. **NCP parameter (switched only)**

Range: 0–256

PASSLIM — Specifies the maximum number of PIUs sent from the host to a PU before the host services another PU. **NCP parameter (non-switched only)**

Default: 1

Range: 1–254

PUTYPE — Specifies the physical unit type of this PU. **NCP parameter**

`SRT` Specifies threshold values for the total number of transmissions and the total number of error retries for this PU.

Default: `(32768,32768)`

Range: `1–32768`

PATH

The PATH statement defines a dial-out path to a PU residing in a switched major node. Up to 256 PATH statements may be defined for each PU.

`USE` Specifies to VTAM whether or not this path is initially usable or not. The effect of this parameter is similar to that of `ISTATUS` for a minor node.

Default: `YES`

Range: `NO`

`DIALNO` `DIALNO` must be specified for SVCs when `CALL=OUT` or `CALL=INOUT` in the X25.LINE statement. It is coded in the following format:

{*HP X.25 net addr*}{*IBM X.25 net addr*}{*pi*}{*VCCINDX*} {*OUFINDX*}

Each field is explained below:

HP X.25 net addr Specifies the HP X.25 Network Address.

Range: `1–15` characters

IBM X.25 net addr Specifies the IBM X.25 Network Address. *IBM X.25 net addr* may be 15 characters long. HP requires that the IBM X.25 Network Address be included in the `DIALNO` definition because the X.25 Call Packet header is checked for the IBM address when a call is received at the HP system. If the address is not included in the packet header (because it was omitted in the `DIALNO` definition) or if the address does not agree with the remote address configured in the HP configuration, the call will be rejected.

Range: `1–15` characters

pi Specifies the protocol used over the connection. If this value is coded, it must equal 3 for HP–IBM SNA X.25 connections. The value 3 indicates that the protocol is LLC3 (QLLC).

VCCINDX A 2-byte index that references an entry in the X25.VCCPT macro. The VCCPT entries contain parameters that are used when the X.25 connection is established.

Range: `00–99`

OUFINDX A 2-byte index that references an entry in the X25.OUFT macro. The OUFT entries define the X.25 user facility sets. Thus `OUFINDX` specifies the user facility set used when the host dials out to the HP 3000.

Range: `00–99`

GRPNM — Specifies the symbolic name of a GROUP statement in an NCP major node that defines a group of SDLC switched links. The group referenced must have all the characteristics necessary to handle the telephone number, and must be compatible with the type of physical unit.

PID — Specifies the path being defined. This identifier is unique for a given PU.

Range: 0–255

LU

There must be an LU definition for each LU associated with a PU. An LU macro must be coded for each IBM 3270 emulation device attached to an IBM 3270 service. For example, emulation of an IBM 3274 cluster controller with three IBM 3278 keyboard/displays and one IBM 3286 printer requires four separate LU macro statements.

luname LU — A one-to-eight character symbolic name for this LU, which is unique throughout the network. *luname* is used by application subsystems, such as CICS, to specify a particular LU.

LOCADDR — Specifies the local address of the LU. **NCP parameter**

Range: 1–255

BATCH — Specifies the priority of the LU. A value of NO specifies a high priority (appropriate for interactive sessions). A value of YES specifies a low priority (appropriate for batch sessions). Note that this parameter is not supported on ACF/NCP version 5 or later. **NCP parameter**

Default: NO

Range: YES,NO

DLOGMOD — Specifies the name of the logmode table entry that corresponds to the LU you are configuring. Refer to "Logmode Table Definitions" in this section. **VTAM parameter**

Default: First entry in the logmode table

ISTATUS — Specifies whether this LU is automatically activated when the major node it is associated with is started. **VTAM parameter**

Default: ACTIVE

Range: ACTIVE,INACTIVE

MODTAB — Specifies the name of the logmode table that contains the LU's logmode entry. Refer to "Logmode Table Definitions" in this section. **VTAM parameter**

Default: IBM-supplied table, ISTINCLM

PACING — Specifies two values, represented by *m* and *n*. The value *m* specifies in which segment the pacing indicator (PI) is to be turned on. The value *n* specifies the number of PIUs or PIU segments that can be sent before waiting for a pacing response. **NCP parameter**

Default: (1,1)

Range: 0–255

SSCPFM — Specifies whether an LU can support character coded messages, or only formatted commands for communication with the SSCP. **VTAM parameter**

Default: FSS

Range: FSS,USSSCS

VPACING — Specifies pacing between host and NCP. **VTAM parameter**

Default: 1

Range: 0–63

USSTAB — Specifies the unformatted system services (USS) table that VTAM uses to translate character-coded requests. **VTAM parameter**

Default: IBM-supplied USS table, ISTINCDT

Logmode Table Parameter Descriptions

COMPROT — Specifies the common LU protocols to be used.

Default: 0

Range: 0–FFFF

FMPROF — A hexadecimal value which represents the function management profile.

logmode — Used as a key for the session parameters in this table entry.

Default: Blanks are substituted.

PSNDPAC — Specifies the primary send pacing count.

Default: 0

Range: 0–3F

SSNDPAC — Specifies the secondary send pacing count.

Default: 0

Range: 0–3F

SRCVPAC — Specifies the secondary receiving pacing count.

Default: 0

Range: 0–3F

PRIPROT — Specifies the primary protocol for the LU.

Default: 0

Range: 0–FF

PSERVIC — The LU presentation services profile. This parameter is 12 bytes long and is broken down as follows:

```
PSERVIC=X'xx.... .... .... .... .... ..'
(PS Profile - LU Type) 1 byte

PSERVIC=X'..xxxxxxxxx.... .... .... '
(PS Usage - Presentation Services Characteristics) 5 bytes
```

```
PSERVIC=X'.... .... .... xxxx.... .... '
(PS Usage - Default Screen Size) 2 bytes

PSERVIC=X'.... .... .... .... xxxx.... '
(PS Usage - Alternate Screen Size) 2 bytes

PSERVIC=X'.... .... .... .... .... xx..'
(PS Usage - Screen Selection) 1 byte

PSERVIC=X'.... .... .... .... .... ..xx'
(Cryptography Options)
```

Default: 000000000000000000000000

Range: 0–FFFFF ... FF 24 places

RUSIZES — This is a hexadecimal value, in the format 'abcd', where '2b * a' equals the inbound to host RU size in bytes, and '2d * c' equals the outbound from host RU size, in bytes. Possible values are shown in table 1-25.

To use the table, locate the desired RU size in table 1-25. The values of the Ax columns and Bx rows determine the first and second hexadecimal values for the RU size. For example, an inbound RU size of 256 has Ax and Bx values of '8' and '5', respectively, or a hexadecimal value of '85'. Therefore, an inbound/outbound RU size of 256 is '8585'.

SECPROT — Specifies the secondary protocol for the LU.

Default: 0

Range: 0–FF

TSPROF — A hexadecimal value which represents the transmission services profile.

Default: 0

Range: 0–FF

Table 1-25. RUSIZES Values in BIND

	Ax							
Bx	8	9	A (10)	B (11)	C (12)	D (13)	E (14)	F (15)
0	8	9	10	11	12	13	14	15
1	16	18	20	22	24	26	28	30
2	32	36	40	44	48	52	56	60
3	64	72	80	88	96	104	112	120
4	128	144	160	176	192	208	224	240
5	256	288	320	352	384	416	448	480
6	512	576	640	704	768	832	896	960
7	1024	1152	1280	1408	1536	1664	1792	1920
8	2048	2304	2560	2816	3072	3328	3584	3840
9	4096	4608	5120	5632	6144	6656	7168	7680
A (10)	8192	9216	10240	11264	12288	13312	14336	15360
B (11)	16384	18432	20480	22528	24576	26624	28672	30720
C (12)	32768	36864	40960	45056	49152	53248	57344	61440
D (13)	65536	73728	81920	90112	98304	106496	114688	122880
E (14)	131072	147456	163840	180224	196608	212992	229376	245760
F (15)	262144	294912	327680	360448	383216	425984	45852	491520

Note: A value of X'ab' in byte 10 or 11 of BIND represents a •2**b.
For example, X'C5' represents (in decimal) 12 • 2**5 = 384.

2

JES Configuration

This chapter contains the JES configuration parameters necessary for a successful connection between JES2, JES3, and POWER and the following HP products:

- SNA NRJE/V and SNA NRJE/iX

Warning

The HP SNA products are emulations of the IBM products. So, some parameters will need particular values based on the requirements needed by the HP products. Code these as specified or results are unpredictable.

Caution

Hewlett-Packard requires that the host be configured as defined in this chapter, following the above guidelines. Any time spent solving problems related to incorrect configuration of the host is billable to the customer on a time and materials basis.

JES2 Requirements (SNA NRJE)

The JES2 configuration consists of defining the remote workstation to JES2 in a configuration file. JES2 requires (either specifically or by default) that the following information be defined for each workstation:

- JES2 global parameters
- LINE*nnnn*—line definition
- RMT*nnnn*—remote workstation definition
- R*nnnn*.PR*m*—remote printer definition
- R*nnnn*.PU*m*—remote punch definition
- R*nnnn*.RD*m*—remote reader definition

Table 2-1 contains the parameters and values required by Hewlett-Packard for SNA NRJE for JES2 version 4.1 and earlier versions. For programmers experienced in configuring 8100 DPPX/RJE workstations and 3770 workstations, the table provides most of the needed information. For more information, see the parameter descriptions at the end of this chapter.

Table 2-1. SNA NRJE: JES2 Parameters

Pre-version 4.1 Parameters	Version 4.1 Parameters	Comments
LINE*nnnn* macro		
UNIT=SNA	UNIT=SNA	Required.
RMT*nnnn* macro		
LUTYPE1	DEVTYPE=LUTYPE1	Required.
LUNAME	LUNAME	Do NOT specify.
BUFSIZE=256 or BUFSIZE=512	BUFSIZE=256 or BUFSIZE=512	Required.
CONSOLE	CONS=YES	Required.
NOCMPCT	COMPACT=NO	Required.
NUMRDR	NUMRDR	Required (specify from 1–7).
SETUPHDR	SETUP=PDIR	Required.
SETUPINF	LOCAL190=INFO	Required.
WAITIME=1	WAITIME=1	Required.

Table 2-1. SNA NRJE: JES2 Parameters (cont.)

Pre-version 4.1 Parameters	Version 4.1 Parameters	Comments
Rn*nnn*.PR*m* macro		
AUTO		Required for Ver. 1.3.2 and earlier.
CCTL	CCTL=YES	Required.
CMPCT/NOCMPCT	COMPACT=NO/YES	Do NOT specify.
COMP/NOCOMP	COMPRESS=NO/YES	Do NOT specify.
START	START=YES	Required.
FCBLOAD/NOFCBLOAD	FCBLOAD=YES/NO	Do NOT specify.
LRECL	LRECL	If specified, must be between 40 and 255.
PRWIDTH	PRWIDTH	Required (value must be between 40 and 255).
SELECT	SELECT	Do NOT specify.
SEP	SEP	Required.
UCS=0	UCS=0	Required.
Rn*nnn*.PU*m* macro		
AUTO		Required for Ver. 1.3.3 and earlier.
CCTL	CCTL=YES	Required.
CMPCT/NOCMPCT	CMPCT=YES/NO	Do NOT specify.
COMP/NOCOMP	COMPRESS=YES/NO	Do NOT specify.
START	START=YES	Required.
SELECT	SELECT	Do NOT specify.
SEP	SEP	Required.
R*nnnn*.RD*m* macro		
START	START	Required.

JES3 Requirements (SNA NRJE)

The JES3 configuration consists of defining the remote workstation to JES3 in a configuration file. JES3 requires (either specifically or by default) that the following information be defined for each workstation:

- JES3 global parameters
- CONSOLE—remote workstation console
- DEVICE—to define printers and punches
- RJPWS—remote workstation definition

JES3 macro and operand values for SNA NRJE should be coded as though a DPPX/RJE 8100 SNA workstation were being installed. Table 2-2 contains the parameter and values required by Hewlett-Packard for SNA NRJE. For more information, see the parameter descriptions at the end of this chapter.

Table 2-2. SNA NRJE: JES3 Parameters

Parameters	Comments
CONSOLE macro	
JNAME	Required.
TYPE=RJP	Required.
DEVICE macro	
DTYPE=RMT*xxxxx*	Required.
JNAME	Required.
RJPWS macro	
N	Required.
RD	Required (specify from 1–7).
C=R	Required.
COMPACT=NO	Required.
AUTO=N	Required.
LU	Do NOT specify.

VSE/POWER Requirements (SNA NRJE)

The VSE/POWER configuration consists of defining the remote workstation to VSE/POWER in a configuration file. VSE/POWER requires (either specifically or by default) that the following information be defined for each workstation:

- VSE/POWER global parameters
- PRMT—remote workstation definition

VSE/POWER macro and operand values for SNA NRJE should be coded as though a DPPX/RJE 8100 SNA workstation were being installed. Table 2-3 contains the parameters and values required by Hewlett-Packard for SNA NRJE. For more information, see the parameter descriptions at the end of this chapter.

Table 2-3. SNA NRJE: VSE/POWER Parameters

Parameters	Comments
POWER	Subparameter SNA=(,,POWER) is required.
PRMT macro	
CONSOLE=YES	Required.
REMOTE	Required.
SESSLIM=6	Required.
TYPE=LUT1	Required.
XLATE=NO	Required.
CMPACT	Do NOT specify.
LU	Do NOT specify.

Note

Parameters that are not listed in table 2-3 can be entered at your discretion. There are no restrictions on them beyond what is required for DPPX/RJE on the IBM 8100.

JES2 Parameter Descriptions

Global JES2 Parameters

Note that the global parameters and subparameters described below have special implications for the SNA NRJE workstation definitions.

Caution 

The parameters are specified in version 1.3.4 format, and must be converted to the new format if your installation is running JES 1.3.6 or later.

`&STDFORM=`*vvvvvvvv*

When a forms ID is not specified, this parameter specifies the default forms ID.

SNA NRJE: If a standard default form is specified, it will apply to the SNA NRJE remote workstation unless it is overridden by JCL or the Lookup Table on the HP 3000.

Default: `STD`

`&PRTFCB=`*xxxx*

The name (*xxxx*) of the forms control buffer (FCB) that JES2 assumes is initially mounted.

SNA NRJE: The default FCB name will be used for the SNA NRJE workstation unless it is overridden.

Default: `6`

`&CCONCHR=c`

The character that will identify JES2 commands from local consoles.

SNA NRJE: If the default is not used, SNA NRJE exit procedures might be required for proper Job Management operation by SNA NRJE.

Recommended value: `$`

Default: `$`

`&MSGID=NO/YES`

Specifies whether each operator message is prefixed with a message identifier.

SNA NRJE: SNA NRJE keys off this identifier when routing output. If `NO` is specified, SNA NRJE exit procedures might be required for proper Job Management operation by SNA NRJE.

Recommended value: `YES`

Default: `YES`

LOGONn

`APPLID=`*vvvvvvvv*

The job entry subsystem that VTAM is expecting.

Recommended value: `JES2`

Default: `JES2`

JES2 Macros and Parameters

This section describes JES2 macros and parameters. Parameters are listed according to JES2 version 4.1 syntax. Some parameters used a different syntax in earlier versions of JES2 than in 4.1; the pre-4.1 syntax is shown in parentheses.

LINEnnn

`Password=`*xxxxxxxx*
A security measure to keep unauthorized users from using this line.

`UNIT=SNA`
Specifies that this is a logical line used in an SNA environment.

RMTnnnn

`DEVTYPE=LUTYPE1 (LUTYPE1)`
Specifies that this is an LU type 1 that can be accessed only through a logical line defined by the `LINE`*nnn* macro with the parameter `UNIT=SNA` specified (described above).

`BUFSIZE=`*nnnn*
The RU size for the workstation. This must match the `RUSIZES` parameter of the `MODEENT` macro in the Logmode Table entry in the ACF/VTAM installation.

Values: `256` (or `512` for SNA NRJE)

Default: `128`

`COMPRESS=YES (COMP/NOCOMP)`
Specifies whether compression is to be done. We *recommend* that `COMPRESS=YES` be specified, so that the workstation is free to choose compression in its configuration. This also means that the `PRIPROT` parameter of the `MODEENT` macro in the Logmode Table entry must be configured for compression.

Recommended value: `COMPRESS=YES (COMP)`

Default: `COMPRESS=NO (NOCOMP)`

`CONS=YES (CONSOLE)`
Specifies that this remote terminal has an operator console.

`COMPACT=NO (NOCMPCT)`
Hewlett-Packard does not support compaction.

`Discintv=`*nnnn*
The amount of time, in seconds, that JES2 will wait for a successful text transmission in either direction before it terminates the session.

Range: `1–8160`

Recommended value: `0`

Default: `0`

`LUNAME=`*xxxxxxxx*
Do not specify this parameter.

`NUMPR=`*n* `NUMPU=`*n* `NUMRDR`
The number of logical printers, punches, and readers. The sum of these parameter values should not be greater than 7 for a remote workstation with a console (`CONS=YES` is specified).

Range: `1–7`

`Password=`*xxxxxxxx*
A security measure to keep unauthorized users from using the remote terminal.

SETUP=MSG (SETUPMSG)	Specifies that JES2 is to inform the remote operator of any setup requirements through messages to the operator console. The alternative parameter, SETUP=PDIR, specifies that the setup information is sent in a Function Management Header. For more information, see the JES2 installation guide for your system.
SETUP=PDIR (SETUPHDR)	Causes JES2 to send a PDIR to the remote workstation. SNA NRJE interprets the information contained there, enabling it to print extra copies and perform Job Management tasks.
LOCAL190=INFO (SETUPINF)	Causes the operator setup messages to be information only.
WAITIME=*n*	Specifies the RTAM wait time, in seconds. For more information, see the JES2 installation guide for your system.

Rnnnn.PRm

This macro specifies the characteristics of a printer at a remote terminal. *nnnn* is the number of the remote terminal specified in the RMT*nnnn* statement.

AUTO	Specify this parameter only for releases before and including Release 1.3.2.
CCTL=YES	Causes JES2 to place carriage control characters in the output stream transmitted to this remote printer.
CKPTLINE=*nnnnn* CKPTPAGE=*nnnnn*	The product of these two parameters determines the chain size for output data sets.
CMPCT=YES/NO (CMPCT/NOCMPCT)	*Do not specify this parameter for SNA NRJE.* Hewlett-Packard does not support compaction.
COMPress=YES/NO (COMP/NOCOMP)	*Do not specify this parameter for SNA NRJE.* By not specifying this parameter, the value specified for the RMT*nnnn* macro defines whether compression is allowed.
FCBLOAD=YES/NO (FCBLOAD/NOFCBLOAD)	*Do not specify this parameter for SNA NRJE.* If SETUPHDR SETUP=PDIR is specified in the RMT*nnnn* macro (described earlier in this chapter), FCBLOAD=NO is forced. So, the parameter FCBLOAD should *not* be specified.
LRECL=*nnn*	The logical record length for this printer. Note the SNA NRJE range limitations in table 2-1. **Range**: 1–255
PRWIDTH=*nnn*	The size, in bytes, of a logical record for the printer; usually, this is 132. Note the SNA NRJE range limitations in table 2-1. **Range**: 1–255 **Default**: 120
SELECT	*Do not specify this parameter* for SNA NRJE. SNA NRJE Output Job Management controls where output will be routed.

`Sep=YES`	Specifies that separator pages will be provided between data set groups.
`START=YES START`	Causes JES2 to start this printer when it starts processing; so, the `DRAIN` parameter *must* not be specified. **Default**: If neither the `START` parameter nor the `DRAIN` parameter is specified, this macro (`R`*nnnn*.PR*m*) defaults to `START`.
`UCS=0`	Specifies the universal character set (UCS) is to be mounted for any output that does not specify a UCS.

Rnnnn.PUm

This macro specifies the characteristics of a card punch at a remote terminal. *nnnn* is the number of the remote terminal specified in the `RMT`*nnnn* statement.

`AUTO`	This parameter is not valid with JES2 1.3.4 or later. The equivalent work selection (WS) criteria to cause automatic selection of data sets with a form other than the one currently mounted on the JES2 printer is `WS=(/F)`.
`CCTL=YES`	Causes JES2 to place carriage control characters in the output stream transmitted to this remote punch.
`CKPTLINE CKPTPAGE`	The product of these two parameters determines the chain size for output data sets.
`COMPCT=YES/NO (CMPCT/NOCMPCT)`	*Do not specify this parameter for SNA NRJE.* Hewlett-Packard does not support compaction.
`COMPRESS=YES/NO (COMP/NOCOMP)`	*Do not specify this parameter for SNA NRJE*. Not specifying this parameter causes whatever is coded in the `RMT`*nnnn* macro (described earlier in this chapter) to take precedence.
`LRECL=nnn`	The logical record length for this punch; usually, this is `80`. Note the SNA NRJE range limitations in table 2-1. **Range**: `1–255` **Default**: `80`
`SELECT`	*Do not specify this parameter for SNA NRJE*. SNA NRJE Job Output Management controls where output will be routed.
`SEP`	Specifies that separator cards will be provided between data set groups.
`START=YES`	Causes JES2 to start this punch when it starts processing; so, the `DRAIN` parameter *must not* be specified. **Default**: If neither the `START=YES` parameter nor the `DRAIN` parameter is specified, this macro (`R`*nnnn*.PU*m*) defaults to `START=YES`.

Rnnnn.RDm

This macro specifies the characteristics of a card reader at a remote terminal. *nnnn* is the number of the remote terminal specified in the `RMT`*nnnn* statement.

`START` Causes JES2 to start this reader when it starts processing.

JES3 Parameter Descriptions

Global JES3 Parameters

Note that the global parameters and subparameters described below have special implications for the SNA NRJE workstation definitions.

BUFFER

`BUFSIZE=`*nnnn*

The length, in bytes, of each record in spool data sets. The value must be a multiple of four.

Range: `1024–4048`

Default: `1248`

COMMDEFN

`APPLID=JES3`

The job entry subsystem VTAM is expecting.

Default: `JES3`

`P=`*password*

This must match the password given for the VTAM parameter `PRTCT` of the `APPL` application definition statement.

`LU=`*nnnn*

This must be greater than or equal to the total number of LU-LU sessions that can exist at any one time between the host and its defined workstations.

Range: `1–4095`

Default: `255`

SYSOUT

`CHNSIZE=`*nn*

The size of the RU chain to be transmitted to SNA workstations. To send the entire data set as a single chain, specify `DS`.

Range: `1–255`

Recommended value: `DS`

Default: `DS`

OUTSERV

`CDSTOCK=`*formname*

The standard form for punch output.

Recommended value: This parameter (`CDSTOCK`) should match the `FORMS` parameter (described below). This makes SNA NRJE Job Management easier to use.

Default: `5081`

`FORMS=`*formname*

The standard form for printer output.

Recommended value: This parameter (FORMS) should match theCDSTOCK parameter (described above). This makes SNA NRJE Job Management easier to use.

Default: 1PRT

JES3 Macros and Parameters

CONSOLE

JNAME=*name* — The name of the SNA remote job processing (RJP) workstation, as given in the RJPWS macro.

TYPE=RJP — Defines this workstation as an RJP workstation.

DEST=*destcode* — The type of console messages this console is to receive. NONE specifies that this console is to receive no console messages and can respond as an entry device.

Recommended value: NONE

LL=*nnn* — The console line length.

Recommended value: 80

Default: 120

LEVEL=*nn* — The level of authority for the console. Commands allowed at this console are determined by the authority level.

Range: 0–15

Recommended value: 10

Default: 0

DEVICE

CHNSIZE=*nnn* — The size of the RU chain to be transmitted to SNA workstations. To send the entire data set as a single chain, specify DS. A CHNSIZE value specified in the SYSOUT global parameter (described earlier in this chapter) will override all the CHNSIZE values specified in this macro (DEVICE).

Range: 1–255

Recommended value: DS

Default: DS

CKPNT=*nnnn* — Specifies that a checkpoint is taken after the specified number of records (*nnnn*).

Recommended value: 1000

Default: Determined by type of printer or punch.

DTYPE=RMT*xxxx* — Specifies whether the device is a printer or a punch.

Required value for printers: RMTPRINT

Required value for punches: RMTPUNCH

FORMS=*forms*

Indicates whether the forms can be changed during writer execution (YES or NO), and designates the initial form to be mounted on the printer. STANDARD means that whatever is specified on the OUTSERV global parameter is to be used.

Recommended value: (YES,STANDARD)

Default: (YES,STANDARD)

JNAME=*name*

The name of the SNA RJP workstation, as given in the RJPWS macro (described below).

SELECT=EX1

Required for an exchange device.

RJPWS

N=*ccccc*

The five-character name (*ccccc*) of the workstation.

RD=*n*

The maximum number of logical readers.

Recommended range: 1–7

Recommended value: 7

Default: 1

PR=*nn*

The maximum number of logical printers at this workstation.

Range: 1–7

Default: 1

PU=*nn*

The maximum number of logical punches at this workstation.

Range: 0–7

Default: 0

C=R

The type of console support for the workstation devices. R *must* be specified to indicate that the printer and console are separate devices. This also means that JES3 will interrupt data streams to send console messages.

COMPACT=NO

Specifies no default compaction.

Default: NO

G=*groupname*

This is used for the group name facility.

P=*password*

The password that must be entered when this workstation logs on.

PL=*n*

The number of invalid logons that can be tried before the workstation is rejected.

Range: 0–9

Recommended value: 2

Default: 2

AUTO=N

N specifies that no automatic logon is allowed.

LU=*luname*

Do not specify this parameter.

`LEVEL=`*nn*

The level of authority for the console. Commands allowed at this console are determined by the authority level.

Range: `0`–`15`

Recommended value: `10`

Default: `0`

POWER Parameter Descriptions

Global POWER Parameters

Note that the global parameters and subparameters described below have special implications for the SNA NRJE workstation definitions.

POWER

`BLOCKGP=`*n*

The block group size for data files. *Specify this parameter for FBA devices only.*

Recommended value: `0`

Default: `0`

`COPYSEP=YES/NO`

Specifies whether separator pages/cards are produced between each copy of the output.

Recommended value: `YES`

Default: `YES`

`DBLK=`*n*

The block size of data file records and the size of each data buffer. If this parameter is omitted or set to zero, VSE/POWER chooses the appropriate block size.

Range: `548–2008`

Recommended value: `0`

Default: `0`

`JLOG=YES/NO`

Specifies whether job information messages will be logged on the system console.

Recommended value: `YES`

Default: `YES`

`JSEP=(`*n,m*`)`

The number of separator pages (*n*) and separator cards (*m*) to be included in the output to separate jobs.

Range: `0–9`

Recommended value: `(1,1)`

Default: `(0,0)`

`NTFYMSG=`*nnn*

The number of messages to be kept in the notify queue.

Range: `1–999`

Recommended value: `64`

`PAUSE=YES/NO`

Specifies whether the punch writer task will wait before a job entry is punched.

Recommended value: `NO`

Default: `NO`

`PRI=`*n*

If a priority is not specified on the `* $ $ JOB` statement, the priority will default to the value specified here.

Range: `1–9`

Default: `3`

`RBS=(`*n*,*m*`)`

The number of pages and cards to be processed before segmentation happens.

Range: `1–999999`

Recommended value: `(0,0)`

Default: `(0,0)`, which means no segmentation.

`RJEBSC=YES/NO`

Specifies whether RJEBSC code should be loaded. If no BSC nodes exist, specify `NO`.

Recommended value: `NO`

Default: `YES`

`SNA=(,,POWER)`

The host job entry subsystem VTAM expects.

`STDCARD=(`*n*,*m*`)`

The number of job entry cards that can be punched before a warning message is issued. 0 means no warning messages will be sent.

Range: `1–999999`

Recommended value: `(0,0)`

Default: `(0,0)`

`STDLINE=(`*n*,*m*`)`

The number of records that can be printed before a warning message is issued. `0` means no warning messages will be sent.

Range: `1–999999`

Recommended value: `(0,0)`

Default: `(0,0)`

POWER Macro and Parameters

PRMT

CMPACT=*name*	*Do not specify this parameter.* Hewlett-Packard does not support compaction.
CONSOLE=YES	Specifies whether outbound data will be interrupted for messages to the remote operator. This parameter can be specified only if the workstation has a line printer in addition to a terminal console.
LSTROUT	The default destination for output from jobs submitted by this remote workstation. If this parameter is omitted, the output will be sent to the device specified by the value of the REMOTE parameter (described below).
LU=*name*	*Do not specify this parameter.*
PSWRD=*password*	The password for the remote station being defined.
PUNROUT	The default destination for punch output from jobs submitted by this remote workstation. If this parameter is omitted, the output will be sent to the device specified by the value of the REMOTE parameter (described below).
REMOTE=*nnn*	The remote identifier. SNA remote identifiers must be higher than BSC identifiers. **Range**: 1–200
SESSLIM=6	The maximum number of sessions that can be logged on at this workstation. **Default:** 1
TYPE=LUT1	The type of terminal to be supported.
XLATE=NO	Specifies whether host outbound SCS control characters are replaced with blanks. **Default**: NO

3

CICS Configuration

This chapter contains the CICS configuration parameters necessary for a successful connection between CICS and the following HP products:

- SNA IMF/V and SNA IMF/iX
- LU 6.2 API/V and LU 6.2 API/iX
- LU 6.2 Base/V
- HP SNADS/iX

The SNA IMF product emulates an IBM 3274/3276 cluster controller (PU.T2) with attached terminal/printer devices. These emulations implement one of the following LU types:

- An IBM 3270 keyboard/display—LU type 2 (LU.T2 or LU.T2X)
- IBM 3270 printers—LU types 1 or 3 (LU.T1, LU.T3

The LU 6.2, and HP SNADS/iX products implement LU type 6.2.

This chapter provides the proper CICS Terminal Control Table (TCT) definitions for LU types 1, 2, 2X, 3, and 6.2. For installations with RDO capability, this chapter includes a cross-reference table that shows the RDO information that corresponds to the TCT macro operands.

Terminal Control Table Requirements

The Terminal Control Table (TCT) defines the logical units used by CICS. The TCT macro `DFHTCT TYPE=TERMINAL` specifies the CICS environment for IBM 3270 keyboard/displays and printers. This environment can include telecommunications devices, sequential processing devices, graphic devices, and intersystem and interregion links. The macro `DFHTCT TYPE=SYSTEM` defines the environment for remote systems served by an LU type 6.2.

This section describes the `DFHTCT TYPE=TERMINAL` and `DFHTCT TYPE=SYSTEM` operands allowed for HP's SNA products. HP requires that you define certain parameters or values as defined in this section. Other operands described are allowed with restrictions where indicated.

Parameter descriptions are in tables organized by LU type. These tables provide the experienced system programmer with most of the information needed to configure CICS. For more information, refer to the "CICS Macro and Operand Descriptions" section that follows, or the CICS/VS Resource Definition Guide for the remote system.

Warning

The HP SNA products are emulations of the IBM products. Thus, some parameters will need particular values based on the requirements of the HP products. Code these as specified or results are unpredictable. Any operands not listed are not allowed in the HP SNA services definitions and, therefore, are not supported. Any time spent solving problems related to incorrect configuration of the host is billable to the customer on a time and materials basis.

DFHTCT TYPE=TERMINAL Requirements

Tables 3-1 through 3-3 contain parameters for the `DFHTCT TYPE=TERMINAL` macro. This macro defines an IBM 3270 LU to CICS. One macro must be coded for each LU.

Table 3-1. Configuring LU Type 1 in CICS

Parameters	Value	Comments
ACCMETH	VTAM	Required
BUFFER	256	Suggested value.
CHNASSY	NO	Suggested value.
ERRATT	NO	Suggested value.
FEATURE	AUDALARM	Suggested value.
FF	YES	Suggested value.
GMMSG		
HF	YES	Suggested value.
NETNAME	*name*	
PGESTAT	AUTOPAGE	Suggested value.
RELREQ	YES, YES	Suggested value.
RUSIZE	256	Required.
TCTUAL	*n*	
TRMIDNT	*name*	Required.
TRMMODL	2	Required.
TRMTYPE	SCSRPT	Required.
TRMSTAT	RECEIVE	Suggested value.
VF	YES	Suggested value.

Table 3-2. Configuring LU Type 2 in CICS

Parameters	Value	Comments
ACCMETH	VTAM	Required.
BUFFER	1536	Suggested value.
CHNASSY	YES	Suggested value.
ERRATT		
FEATURE	AUDALARM SELCTPEN	Suggested value.
GMMSG	YES	Suggested value.
NETNAME	*name*	
RELREQ	NO, YES	Suggested value.
RUSIZE	256	Required.
TCTUAL	*n*	
TIOAL	*n,n*	Maximum chain size must not exceed 3870 when configuring SNA IMF for data stream mode.
TRMIDNT	*name*	Required.
TRMMODL	2	Required.
TRMTYPE	LUTYPE2	Required.
TRMSTAT	TRANSCEIVE	Suggested value.

Table 3-3. Configuring LU Type 3 in CICS

Parameters	Value	Comments
ACCMETH	VTAM	Required.
BUFFER	256	Suggested value.
CHNASSY	NO	Suggested value.
FEATURE	AUDALARM	Suggested value.
FF	NO	Required.
GMMSG		
HF	NO	Required.
NETNAME	*name*	Suggested value.
PGESTAT	AUTOPAGE	Suggested value.
RELREQ	YES, YES	Suggested value.
RUSIZE	256	Required.
TCTUAL	*n*	Suggested value.
TRMIDNT	*name*	Required.
TRMMODL	2	Required.
TRMTYPE	LUTYPE3	Required.
TRMSTAT	RECEIVE	Suggested value.
VF	NO	Required.

DFHTCT TYPE=SYSTEM Requirements

Table 3-4 contains parameters for the DFHTCT TYPE=SYSTEM macro. This macro defines an LU 6.2 intercommunication link to CICS.

Table 3-4. Configuring LU Type 6.2 in CICS

Parameters	Value	Comments
ACCMETH	VTAM	Required.
BUFFER	256	Required.
FEATURE	SINGLE	APPC/V and APPC/iX do not support parallel CICS sessions.
NETNAME	*name*	
RUSIZE	256	Required.
SYSIDNT	*sysname*	Required.
TRMTYPE	LUTYPE62	Required.
TRMSTAT	TRANSCEIVE	Required.

CICS Macro and Operand Descriptions

This section describes CICS operands for the macros DFHTCT TYPE=TERMINAL and DFHTCT TYPE=SYSTEM.

Warning

The configuration values HP's SNA products require are in the tables that precede this section. Discussion of a specific value in the following pages does not imply that a particular HP SNA product can support that value.

DFHTCT TYPE=TERMINAL Macro

The DFHTCT TYPE=TERMINAL macro defines the characteristics of an IBM 3270 LU and the CICS options that apply to the device supported by the LU. One DFHTCT TYPE=TERMINAL macro is coded for each LU.

ACCMETH — The value ACCMETH=VTAM specifies that a VTAM TCT terminal entry (TCTTE) is to be generated.

BUFFER — Specifies the size of the buffer that the remote LU uses to receive a Request Unit (RU) from CICS. Messages longer than the size of BUFFER are segmented into a number of RUs that are chained together for recovery purposes.

Default: 256

Range: 810–1536

CHNASSY — Specifies whether chains are to be assembled on input by terminal control before any processing is performed on any part of the chain.

Default for LU.T2: YES

Default for LU.T1 and LU.T3: NO

ERRATT — Specifies attributes of the error message line.

Default: NO

FEATURE — Code this operand with the features that apply to the LU being emulated. The features found in tables 3-1 through 3-3 are described below.

AUDALARM specifies the IBM 3270 audible alarm feature.

COLOR specifies the extended color feature which allows colors to be selected for each field or character.

EXTDS specifies extensions to the IBM 3270 data stream.

HILIGHT specifies the extended highlighting feature. This enables fields or characters to be displayed in reverse-video, underline mode, or blink.

SELCTPEN specifies the Selector Pen feature—allows the Cursor Select feature. Not used by CICS—simply provides information to application programs that require information about a particular device's available features.

FF — Specifies whether the LU supports the SCS Forms Feed (FF) control character.

Default: NO

GMMSG — Specifies whether the CICS "good morning" message will be displayed when the logical unit is signed on to VTAM. If you have specified ERRATT=LASTLINE, the "good morning" message will not overwrite the error message line.

Default: NO

HF — Specifies whether the LU supports the SCS Horizontal Format (HF) feature.

Default: NO

NETNAME — Specifies a one-to-eight character symbolic name, which is the LUname specified for this LU in the NCP/VTAM generation. The value of NETNAME must match the network name of the LU specified at the start of the LU macro.

Default: The value of TRMIDENT padded with four trailing blanks.

PGESTAT — Indicates the type of paging activity that occurs at a given terminal. AUTOPAGE indicates that a number of pages can be sent as a chain, without a response from the LU after each page.

Default: AUTOPAGE

RELREQ — The first field specifies whether CICS can release the LU if it is not currently active in a transaction. The second field indicates whether CICS honors a disconnect request from the LU. A CSSF LOGOFF or GOODNIGHT from the terminal will also cause disconnection if YES is specified in the second field.

Default for first field: NO

RUSIZE — Specifies the size of the RU that can be sent from the LU to CICS.

Default: 256

Range: 10–256

TCTUAL — Specifies a user area length for this terminal. The TCT user area is initialized to zeros at system initialization time. System dependent, this operand may be used by application and/or system level routines as required at your IBM installation.

TIOAL — Used in conjunction with CHNASSY=YES. Specifies a normal chain size and a maximum chain size. DFHZCP initially acquires a TIOAL of normal chain size to satisfy a transaction RECEIVE request. If the normal chain size is not large enough, a larger TIOAL will be acquired, limited by the value of maximum chain size.

TRMIDNT — Specifies a unique four-character symbolic identifier (*name*) for each terminal. The value of NETNAME defaults to the value of TRMIDNT padded with four trailing blanks.

TRMMODL — Specifies the model number of the terminal. A number of other operands, such as DEFSCRN and ALTSCRN, default to the screensize value associated with TRMMODL.

TRMTYPE — This operand must be coded with the keyword that specifies the kind of device the LU supports.

TRMSTAT — The value for this operand specifies the types of activity that may occur at a terminal.

TRANSCEIVE specifies that a given terminal can initiate transactions and receive messages.

RECEIVE indicates that a terminal can receive messages, but cannot accept input.

Default: TRANSCEIVE

VF — Specifies whether the LU supports the SCS Vertical Format (VF) feature.

Default: NO

DFHTCT TYPE=SYSTEM Macro

The DFHTCT TYPE=SYSTEM macro is used to define the characteristics of an LU type 6.2 and the CICS options that apply to the application supported by the LU. One DFHTCT TYPE=SYSTEM macro is coded for each LU type 6.2.

ACCMETH — The value ACCMETH=VTAM specifies that a VTAM TCT terminal entry (TCTTE) is to be generated.

BUFFER — Specifies the size of the buffer that the remote LU uses to receive an RU from CICS. CICS messages longer than the size of BUFFER are segmented into a number of RUs that are chained together for recovery purposes.

Default: 256

Range: 10–1536

FEATURE — Specifies applicable features for a given device. SINGLE specifies that an LU type 6.2 terminal is supported on a single session with CICS. Coding this value causes CICS to generate a DFHTCT TYPE=TERMINAL macro which is automatically combined with the DFHTCT TYPE=SYSTEM macro.

NETNAME — Specifies a one-to-eight character symbolic name, which is the LUname specified for this LU in the NCP/VTAM generation. NETNAME must match the network name of the LU specified at the start of the LU macro.

Default: The value of SYSIDNT, padded with four trailing blanks.

RUSIZE — Specifies the maximum size RU that can be sent from the LU to CICS.

Default: 256

SYSIDNT — Specifies a unique four-character symbolic identifier for each terminal. If you do not supply a NETNAME, then NETNAME defaults to SYSIDNT. SYSIDNT must in turn satisfy the requirements of NETNAME.

TRMTYPE — Specifies the type of system being connected to CICS. LUTYPE62 specifies that this is an LU type 6.2 intercommunication link.

TRMSTAT — Specifies the types of transactions that can occur at a given terminal. TRANSCEIVE indicates that the terminal can initiate transactions, and that it can receive messages.

Default: TRANSCEIVE

Resource Definition Online

Resource Definition Online (RDO) allows a system programmer to interactively define resources to CICS. The system programmer can install RDO definitions as CICS system tables, by specifying a list of definitions at system initialization time. The system programmer can also install these definitions while CICS is running, so that they can be used immediately.

Table 3-5 lists the macros and operands used to define resources in a Terminal Control Table, and lists the corresponding RDO keywords used to define those resources.

Table 3-5. TCT Macro to RDO Keyword Cross-Reference

DFHTCT Operand	DFHTCT Type=	Resource Definition	RDO Attribute
ACCMETH=VTAM	SYSTEM/TERMINAL	Connection	ACCESSMETHOD
BUFFER	SYSTEM/MODESET/TERMINAL	Sessions	SENDSIZE
BUFFER	SYSTEM/MODESET/TERMINAL	Typeterm	SENDSIZE
CHNASSY=YES	SYSTEM/TERMINAL	Sessions	BUILDCHAIN
CHNASSY=YES	SYSTEM/TERMINAL	Typeterm	BUILDCHAIN
ERRATT=BLINK	TERMINAL	Typeterm	ERRHILIGHT
ERRATT=REVERSE	TERMINAL	Typeterm	ERRHILIGHT
ERRATT=UNDERLINE	TERMINAL	Typeterm	ERRHILIGHT
ERRATT=*COLOR*	TERMINAL	Typeterm	ERRCOLOR
ERRATT=INTENSIFY	TERMINAL	Typeterm	ERRINTENSIFY
ERRATT=LASTLINE	TERMINAL	Typeterm	ERRINTENSIFY
FEATURE=AUDALARM	TERMINAL	Typeterm	AUDIBEALARM
FEATURE=*COLOR*	TERMINAL	Typeterm	COLOR
FEATURE=EXTDS	TERMINAL	Typeterm	EXTENDEDDS
FEATURE=HILIGHT	TERMINAL	Typeterm	HILIGHT
FEATURE=SELCTPEN	TERMINAL	Typeterm	LIGHTPEN
FEATURE=SINGLE	SYSTEM	Connection	SINGLESESS(YES)
FF	TERMINAL	Typeterm	FORMFEED
GMMSG	TERMINAL	Typeterm	LOGONMSG
HF	TERMINAL	Typeterm	HORIZFORM
MAXSIZE	MODESET	Sessions	MAXIMUM

Table 3-5. TCT Macro to RDO Keyword Cross-Reference (cont.)

DFHTCT Operand	DFHTCT Type=	Resource Definition	RDO Attribute
MODENAME	SYSTEM	Sessions	MODENAME
NETNAME	SYSTEM/TERMINAL	Connection	NETNAME
NETNAME	SYSTEM/TERMINAL	Sessions	NETNAME
PGESTAT=AUTOPAGE	TERMINAL	Typeterm	AUTOPAGE
RELREQ	TERMINAL	Sessions	DISCREQ
RELREQ	TERMINAL	Typeterm	DISCREQ
RUSIZE	SYSTEM/MODESET/TERMINAL	Sessions	RECEIVESIZE
RUSIZE	SYSTEM/MODESET/TERMINAL	Typeterm	RECEIVESIZE
SYSIDENT	SYSTEM/MODESET/TERMINAL	Sessions	CONNECTION
TCTUAL	SYSTEM/MODESET/TERMINAL	Sessions	USERAREALEN
TCTUAL	SYSTEM/MODESET/TERMINAL	Typeterm	USERAREALEN
TIOAL	SYSTEM/TERMINAL	Sessions	IOAREALEN
TIOAL	SYSTEM/TERMINAL	Typeterm	IOAREALEN
TRMIDNT	TERMINAL	Sessions	SESSNAME
TRMIDNT	TERMINAL	Terminal	TERMINAL
TRMMODL	TERMINAL	Typeterm	TERMMODEL
TRMSTAT=RECEIVE	SYSTEM/TERMINAL	Typeterm	ATI(YES) and TTI(NO)
TRMSTAT=TRANSCEIVE	SYSTEM/MODESET/TERMINAL	Typeterm	ATI(NO) and TTI(YES)
TRMTYPE=LUTYPE62	SYSTEM/TERMINAL	Sessions	PROTOCOL(APPC)
TRMTYPE=LUTYPE62	SYSTEM/TERMINAL	Connection	PROTOCOL(APPC)
VF	TERMINAL	Typeterm	VERTICALFORM

4

IMS Configuration

This chapter contains the IMS configuration parameters necessary for a successful connection between IMS and the HP SNA products listed below:

- SNA IMF/V and SNA IMF/iX

These products emulate an IBM 3274/3276 cluster controller (PU.T2) with attached terminal/printer devices. Each of the terminal/printer emulations can be LU type 1 (LU.T1), 2 (LU.T2), or 3 (LU.T3).

IMS Requirements

The IMS configuration consists of defining the LU and its associated end-user device. IMS requires that the following information be defined:

- `TYPE`—describes common characteristics of a group of SNA LUs of the same type. One `TYPE` macro is required for all SNA 3270 keyboard/displays and one for all 3270 printers.
- `TERMINAL`—describes characteristics of an SNA LU and its associated end-user device. One `TERMINAL` macro is required for each LU.
- `NAME`—associates an IMS name with an LU name. One `NAME` macro is required for each LU.

This chapter contains the information necessary to configure LU types 1, 2, and 3 for SNA IMF. Tables 4-1 and 4-2 contain the parameters required by Hewlett-Packard, and their values. For experienced IMS programmers, the table will provide most of the needed information. For more information, see "IMS Macro and Operand Descriptions" later in this chapter.

Warning

The HP SNA products are emulations of the IBM products. So, some parameters will need particular values based on the requirements of the HP products. Code these as specified or results are unpredictable.

Caution

Hewlett-Packard requires that the host be configured as defined in this chapter, following the above guidelines. Any time spent solving problems related to incorrect configuration of the host is billable to the customer on a time and materials basis.

Table 4-1. Configuring IMS Parameters for LU.T1 and LUT3

IMS Operands and Values	Comments
TYPE macro	
UNITTYPE=SLUTYPE1	Required.
TERMINAL macro	
NAME=*luname*	Required.
MODEL=2	Required.
MSGDEL=NOTERM	Required.
OUTBUF=*bufsize*	Required.

Table 4-2. Configuring IMS Parameters for LU.T2 and LU.T2X

IMS Operands and Values	Comments
TYPE macro	
UNITTYPE=SLUTYPE2	Required.
TERMINAL macro	
NAME=*luname*	Required.
MODEL=2	Required.
FEAT=(PFK,NOCD)	Required.
OPTIONS=*	Required.
OUTBUF=*bufsize*	Required.

* For more information, see "IMS Macro and Operand Descriptions" later in this chapter.

Note SNA IMF does not support LU.T2X.

IMS Macro and Operand Descriptions

The IMS installation macro operands for the `TYPE` and `TERMINAL` macros allowed for HP SNA products are described below.

Note 

See the IMS installation manual for your system for a more thorough explanation of the macros and their values.

TYPE

Defines the SNA LU type. The `TYPE` macro contains all `TERMINAL` and `NAME` macros until another `TYPE` macro appears.

`UNITTYPE=` Specifies the LU type for all `TERMINAL` macros defined under this `TYPE` macro:

- `SLUTYPE1` Specifies LU type 1. This must be specified for LU.T1 and LU.T3 printers.
- `SLUTYPE2` Specifies LU type 2. This must be specified for LU.T2 and LU.2X terminals.

TERMINAL

Defines the characteristics of a 3270 LU and the IMS operations that apply. A `TERMINAL` macro is specified for each 3270 LU. Unless otherwise noted, each operand applies to both keyboard/displays and printers.

`NAME=`*luname* Specifies a one-to-eight character name (*luname*), which is the LU name specified for this LU in the NCP/VTAM generation. Do *not* specify `LINE` or `ALL` as *luname*.

`MODEL=2` Specifies a display screen or print buffer size of 1920 characters. For other screen or buffer sizes, see the IMS installation guide for your system.

`MSGDEL=NOTERM` Specifies that IMS/VS should discard DFS059 TERMINAL status messages and DFS2002 TERMINAL CONNECTED status messages for this terminal.

`FEAT=(PFK,NOCD)` Specifies that program function keys (PFKs) are available on this keyboard.

Default: `(PFK,CARD,PEN)`

`OUTBUF=bu`*fsize* Specifies the size of the IMS output buffer to be used to pass a Request Unit (RU) to VTAM. For a keyboard/display, this buffer contains the 3270 commands and data for a single 3270 screen (or portion to be updated). This value can be used by IMS to establish the BIND. If it is specified incorrectly, it could cause rejection of the BIND by the device.

Range: 256–32000

Recommended Value for LU.T1: size of average print session

Recommended Value for LU.T2 and LU.T3: 1536

Default: 2000

`OPTIONS=` Specifies whether IMS can initiate the screen print ("local copy") feature. This function is dependent upon whether an LU type 1 printer has been configured in NCP/VTAM and IMS:

`COPY`	The printer is configured. Note that the printer must be attached to the same cluster controller as the keyboard/display.
`NOCOPY`	The printer is not configured.

Default: `COPY`

5

DISOSS Configuration

This chapter describes the configuration parameters necessary for a successful connection between DISOSS and HP SNADS/iX.

HP SNADS/iX enables users on the HP 3000 mail system HP DeskManager to send and receive documents, messages, and notes from users on the SNA/DS network.

SNADS/iX to DISOSS Configuration

This section describes the configuration parameters necessary for a successful connection between HP SNADS/iX to DISOSS.

Since SNA/DS is a store and forward network, the entries necessary for a connection between HP SNADS/iX to DISOSS are only needed in the routing table and directory.

To enable HP Desk and SNA/DS users to exchange documents and messages, two parallel configurations must occur:

- The HP Desk users on the HP 3000 (referred to as "HP Desk resident users" in this document) must be defined in the DISOSS Host User Profile (HUP) data set. The HUP data set defines the types of users and their locations or addresses in the network, as well as qualified user names and passwords.
- The SNA/DS users in the DISOSS network (referred to as "SNA/DS resident users" in this document) must be defined in the HP Desk foreign address alias table.

Two blank worksheets are provided at the end of the chapter to facilitate these configurations. The filled-in worksheets provide the information necessary to define HP Desk users in the DISOSS HUP or to define SNA/DS users in the HP Desk foreign address alias table. The worksheets are described in the following sections.

Configuring HP Desk Resident Users in the DISOSS HUP

The Worksheet for HP Desk Resident Users provides information that the DISOSS administrator needs to configure HP Desk users into the HUP. This worksheet is also used by the HP SNADS/iX gateway administrator to configure the foreign address alias table within HP Desk.

Figure 5-1 shows the HP SNADS/iX configuration worksheet for HP Desk resident users.

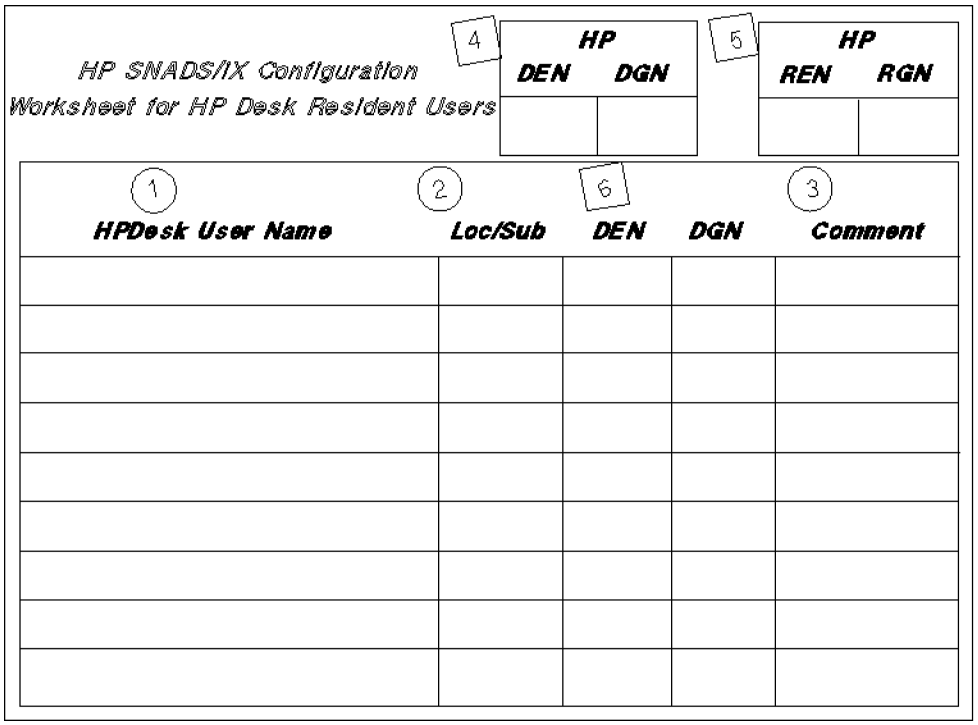


Figure 5-1. HP Desk Resident User Worksheet

The fields correspond to the numbers on the worksheet. Fields 1, 2, and 3 should be completed by the HP SNADS/iX gateway administrator. Fields 4, 5, and 6 should be completed by the IBM system programmer.

`Field 1: HP Desk User Name` — Specifies the name of each HP Desk user. Allows the HP SNADS/iX gateway administrator to generate the DEN component of an SNA/DS address.

`Field 2: Loc/Sub` — Specifies the location and sublocation of each HP Desk user. Allows the HP SNADS/iX gateway administrator to use regional groupings when generating the DGN component of an SNA/DS address.

`Field 3: Comment` — Specifies additional information that may be required when generating the DGN component of an SNA/DS address. This information may be required if a DGN is associated with the division or department of a user. This field has been provided to communicate this information to the IBM system programmer.

Note

After the HP SNADS/iX gateway administrator has completed the above fields, the DISOSS administrator should complete fields 4, 5, and 6 of the worksheet. After each field has been completed for each user specified on the worksheet, the DISOSS administrator should have the information necessary to configure the HP Desk users into the directory (HUP) and routing tables of DISOSS.

`Field 4: HP DEN DGN` Specifies a gateway user for the distribution of nondelivery reports and handling IBM to HP explicit addresses. A DEN and DGN must be chosen for HP SNADS/iX.

`Field 5: HP REN RGN` Specifies the IBM SNA/DS address of the HP node in the SNA/DS network. All messages being sent to the HP node will have this REN and RGN in their destination address. A REN and RGN must be chosen for HP SNADS/iX.

`Field 6: User DEN DGN` Specifies a DEN and DGN for each user specified in the table. The information that the HP SNADS/iX gateway administrator provided in the Comment field should be used to determine the DEN and DGN for each user.

A copy of the completed worksheet should be given to the HP SNADS/iX gateway administrator to configure all HP Desk resident users into the HP Desk foreign address alias table.

ADD Control Statement Parameter Definitions

The HUP Create and Maintenance Utility uses the `ADD` control statement to add a new user definition to the HUP. With the `ADD` control statement, there are keywords that are specified to define a user in the HUP. This chapter lists the keywords that must be specified and presents guidelines for setting values for these keywords in defining the routing table and directory for HP SNADS/iX users.

The `DELETE` and `UPDATE` control statements can be used to change existing HUP data set entries. These control statements and their keywords are described in the IBM publication, *DISOSS Installation and Administration Reference*.

The following section defines the parameters that are used for the connection between HP SNADS/iX to DISOSS. Keywords and values as shown, must be specified in the `ADD` control statement. Other keywords described are allowed with restrictions where indicated.

The `ADD` control statement and parameters for the routing table and the directory must be specified. The `ADD` control statement parameters specified for the routing table are different than the parameters specified for the directory (HUP).

Warning

Any keywords not listed are not allowed for definition of a user on the HP 3000 and therefore are not supported by HP.

Routing Table Parameters

The routing table determines the communication route that is used to distribute documents to particular users at particular systems.

The following parameters are used with the `ADD` control statement for the routing table.

`RGN=`*Routing Group Name*	Groups SNA/DS nodes for routing purposes. The RGN value can be one to eight characters, an asterisk, or blank. All capital letters must be used when specifying the RGN.
`REN=`*Routing Element Name*	Identifies a single node for routing purposes. The REN value can be one to eight characters or an asterisk. All capital letters must be used when specifying the REN.
`SSL=`*service level*	Sets the SNA/DS services level to different distribution priorities for the various queues. An asterisk can be specified for the *service level*.
`QUEUE=`*luname*	Points to the correct TCT entry for remote distributions. The *luname* equates to the CICS/VS TCT `SYSIDENT` value.
`TRANSID=`*transaction*	Specifies the DISOSS transaction ID that will be started if a distribution is to be sent to this particular user/system.

Note

If both the REN and RGN contain an asterisk, then all messages that have no matching REN.RGN are routed here.

Directory (HUP) Parameters

The directory identifies each user to DISOSS. Each user on each system may be fully defined or generic definitions may be made for groups of users.

The following parameters are used with the `ADD` control statement for the directory.

`USERTYPE=`*device*	Identifies the type of device a user normally logs on to.
`DDN=`*Document Distribution Node*	Identifies the second part of the user name. The `DDN` can be one to eight characters or an asterisk. All capital letters must be used when specifying the DDN.
`SA=`*Source Address*	Specifies the first part of the user name. The `SA` can be one to eight characters. All capital letters must be used when specifying the SA.
`RGN=`*Routing Group Name*	Groups SNA/DS nodes for routing purposes. The RGN specified here is routed to using the RGN specified in the routing table. The RGN value can be blank. All capital letters must be used when specifying the RGN.
`REN=`*Routing Element Name*	Identifies a single node for routing purposes. The REN specified here is routed to using the REN specified in the routing table. All capital letters must be used when specifying the REN.

Note

If you specify an asterisk for both the `DDN` and `SA` parameters, and a user cannot be matched to a specific node, the user will be matched to the node that contains an asterisk in the `DDN` and `SA` fields.

Configuring SNA/DS Resident Users into HP Desk

The Worksheet for IBM SNA/DS Resident Users provides information that the HP SNADS/iX gateway administrator needs to configure SNA/DS users into the HP Desk foreign address table.

Figure 5-2 shows the configuration worksheet for IBM SNA/DS resident users.

HP SNADS/iX Configuration Worksheet
for IBM SNA/DS Resident Users

1 User Name	2 DEN	DGN	3 REN	RGN	4 Loc/Sub

Figure 5-2. IBM SNA/DS Resident User Worksheet

The fields correspond to the numbers on the worksheet. Fields 1, 2, and 3 should be completed by the DISOSS administrator. Field 4 should be completed by the HP SNADS/iX gateway administrator.

`Field 1: User Name` Specifies the IBM SNA/DS user's name. This name should be obtained from a company wide directory or phone book.

`Field 2: DEN DGN` Specifies the IBM SNA/DS address for the user name in field 1. **The DEN and DGN must be in all uppercase letters.**

`Field 3: REN RGN` Specifies the REN and RGN for the DEN.DGN in field 2 or the REN.RGN for an IBM machine that supports SNA/DS redirection. All messages sent from HP SNADS/iX to the DEN and DGN for a user will be sent to the REN and RGN

specified for that user. The REN and RGN specified for a user must have the capability of forwarding a message to its final destination. **The REN and RGN must be in all uppercase letters.**

Note

After completing the above fields for each IBM SNA/DS user, the DISOSS administrator should give the worksheet to the HP SNADS/iX gateway administrator to complete the remaining field.

`Field 4: Loc/Sub` Specifies the location and sublocation for each IBM SNA/DS resident user who will be addressed transparently.

The completed worksheet will provide all the information necessary for the HP SNADS/iX gateway administrator to configure the IBM SNA/DS resident users.

DISOSS Worksheets

The following pages contain blank versions of the worksheets described previously in this chapter. Use copies of these worksheets to facilitate your DISOSS configurations.

HP SNADS/IX Configuration Worksheet for HP Desk Resident Users

4 HP DEN	HP DGN	5 HP REN	HP RGN

1 HPDesk User Name	2 Loc/Sub	6 DEN	DGN	3 Comment

HP SNADS/iX Configuration Worksheet
for IBM SNA/DS Resident Users

1 User Name	2 DEN	DGN	3 REN	RGN	4 Loc/Sub

6

AS/400 Configuration

This chapter describes the configuration parameters necessary for a successful connection between an AS/400 and the following HP-to-IBM networking products:

- SNA IMF/iX
- SNA IMF/iX over X.25
- SNADS/iX
- LU 6.2 API/iX
- SNA/Token Ring/iX

SNA IMF/V and SNA IMF/iX Configuration

This section describes the AS/400 configuration parameters that must be specified in order for the AS/400 to communicate with SNA IMF on the HP 3000.

Display Line Description

This portion of the AS/400 configuration describes the connection between the AS/400 and the HP 3000.

`ROLE` (Data link role) Must be `*PRI` (data link role for the AS/400).

`MAXFRAME` (Maximum frame size) Must match the `MAX DATA` value configured on the HP 3000 SNA Node Configuration: PU Data screen.

`LINESPEED` (Line speed) Must match the `Transmission Speed` value configured on the HP 3000 SNA Node Configuration: SDLC Link Data screen.

Display Controller Description

This portion of the AS/400 configuration describes the HP 3000 as a 3274 Cluster Controller.

`EXCHID` (Exchange identifier) Must match the `ID BLK` and `ID NUM` values configured on the HP 3000 SNA Node Configuration: PU Data screen for dial-up lines.

`STNADR` (Station address) Must match the `Station ID` value configured on the HP 3000 SNA Node Configuration: SDLC Link Data screen.

Display Device Description

This portion of the AS/400 configuration describes the terminals connected to the HP 3000.

`DEVD` (Device description) Must match the `LU name values` configured on the HP 3000 SNA Node Configuration: LU Data screen and in the SNA IMF Configuration: Security Class Data screen.

`TYPE` (Device type) Must be `3277` for display terminals.

SNA IMF/iX over X.25 Configuration

This section describes the AS/400 configuration parameters that must be specified in order for the AS/400 to communicate with SNA IMF/iX over an X.25 network.

Display Line Description

This portion of the AS/400 configuration describes the connection between the AS/400 and the HP 3000.

`NETADDR` (Local network address) Must match the `Remote's X.25 Network Address` value configured on the HP 3000 SNA Node Configuration: X.25 Link Data screen.

Display Controller Description

This portion of the AS/400 configuration describes the HP 3000 as a 3274 Cluster Controller.

`EXCHID` (Exchange identifier) Must match the `ID BLK` and `ID NUM` values configured on the HP 3000 SNA Node Configuration: PU Data screen for dial-up lines.

Display Device Description

This portion of the AS/400 configuration describes the terminals connected to the HP 3000.

`DEVD` (Device description) Must match the `LU name` values configured on the HP 3000 SNA Node Configuration: LU Data screen and in the SNA IMF Configuration: Security Class Data screen.

`TYPE` (Device type) Must be `3277` for display terminals.

HP SNADS/iX Configuration

This section describes the AS/400 configuration parameters that must be specified in order for the AS/400 to communicate with HP SNADS/iX.

To enable HP Desk users and SNA/DS users on an AS/400 (such as AS/400 Office users) to exchange documents and messages, two parallel configurations must occur:

- The HP Desk users on the HP 3000 (referred to as "HP Desk resident users" in this document) must be defined in the AS/400 system directory. The system directory defines each user's location or address in the network and other information, such as mailing address, telephone number, etc.
- The SNA/DS users in the AS/400 network (referred to as "SNA/DS resident users" in this document) must be defined in the HP Desk foreign address alias table.

Two worksheets are provided to facilitate these configurations. The filled-in worksheets provide the information necessary to define HP Desk users in the AS/400 system directory or to define SNA/DS users in the HP Desk foreign address alias table. The worksheets are described in the following sections.

Configuring HP Desk Resident Users in the AS/400 System Directory

The Worksheet for HP Desk Resident Users provides information that the AS/400 administrator needs to configure HP Desk users into the AS/400 system directory. This worksheet is also used by the HP SNADS/iX gateway administrator to configure the foreign address alias table within HP Desk.

Figure 6-1 shows the HP SNADS/iX configuration worksheet for HP Desk resident users.

The fields correspond to the numbers on the worksheet. Fields 1, 2, and 3 should be completed by the HP SNADS/iX gateway administrator. Fields 4, 5, and 6 should be completed by the IBM system administrator.

Note

DEN, DGN, REN, and RGN are generic IBM SNA/DS terms that describe a user's fully-qualified IBM name in the SNA/DS network. In the AS/400 configuration, DEN is referred to as "user ID," DGN is "user address," REN is "system name," and RGN is "system group."

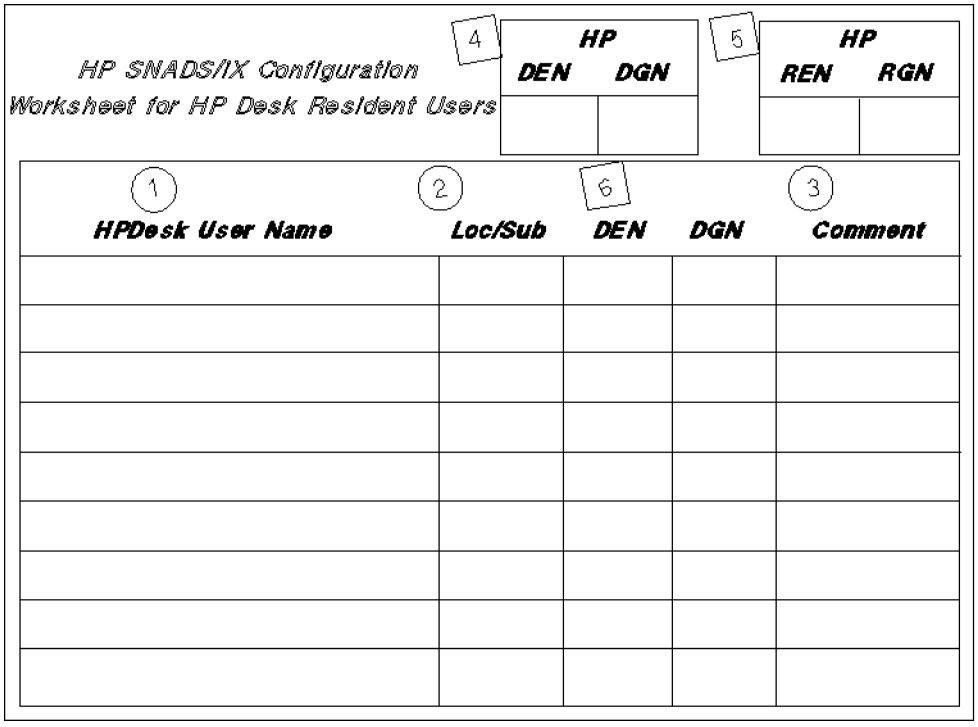


Figure 6-1. HP Desk Resident User Worksheet

`Field 1: HP Desk User Name` — Specifies the name of each HP Desk user. Allows the HP SNADS/iX gateway administrator to generate the DEN component of an SNA/DS address.

`Field 2: Loc/Sub` — Specifies the location and sublocation of each HP Desk user. Allows the HP SNADS/iX gateway administrator to use regional groupings when generating the DGN component of an SNA/DS address.

`Field 3: Comment` — Specifies additional information that may be required when generating the DGN component of an SNA/DS address. This information may be required if a DGN is associated with the division or department of a user. This field has been provided to communicate this information to the IBM system administrator.

Note

After the HP SNADS/iX gateway administrator has completed the above fields, the AS/400 system administrator should complete fields 4, 5, and 6 of the worksheet. After each field has been completed for each user specified on the worksheet, the AS/400 system administrator should have the information necessary to configure the HP Desk users into the system directory and routing table of the AS/400.

`Field 4: HP DEN DGN` — Specifies a gateway user for the distribution of non-delivery reports and handling IBM to HP explicit addresses. A DEN (user ID) and DGN (user address) must be chosen for HP SNADS/iX.

`Field 5: HP REN RGN` — Specifies the IBM SNA/DS address of the HP node in the SNA/DS network. All messages being sent to the HP node will have this REN and RGN in their destination address. A REN (system name) and RGN (system group) must be chosen for HP SNADS/iX.

`Field 6: User DEN DGN` — Specifies a DEN (user ID) and DGN (user address) for each user specified in the table. The information that the HP SNADS/iX gateway administrator provided in the Comment field should be used to determine the DEN and DGN for each user.

A copy of the completed worksheet should be given to the HP SNADS/iX gateway administrator to configure all HP Desk resident users into the HP Desk foreign address alias table.

AS/400 System Directory Entries

The AS/400 system directory identifies each AS/400 user. Each user on each system may be fully defined or generic definitions may be made for groups of users.

The following fields are used with the Add New Directory Entry screen (`WRKDIR` command).

`User ID` — Specifies the first part of the user name. The user ID can be one to eight characters. All capital letters must be used when specifying the user ID. Note that in IBM SNA/DS terminology, this is referred to as the DEN.

`User Address` — Identifies the second part of the user name. The user address can be one to eight characters or an asterisk. All capital letters must be used when specifying the user address. Note that in IBM SNA/DS terminology, this is referred to as the DGN.

`System Name` — Identifies a single node for routing purposes. The system name specified here is routed to the system name specified in the routing table. All capital letters must be used when specifying the system name. Note that in IBM SNA/DS terminology, this is referred to as the REN.

`System Group` — Groups SNA/DS nodes for routing purposes. The system group name specified here is routed to the system group name specified in the routing table. This value can be blank. All capital letters must be used when specifying the system group name. Note that in IBM SNA/DS terminology, this is referred to as the RGN.

Note

If you specify an asterisk for both the user ID and the user address fields of a system directory entry, this becomes a default directory entry. Any mail messages sent to a user who is not configured elsewhere in the directory will be matched to the system name and group specified by the default entry and will be sent via that route.

Configuring a Distribution Queue

In order for AS/400 Office users to send messages to HP Desk users, HP SNADS/iX must have at least one distribution queue configured on the AS/400. A distribution queue serves to map a remote system address (in this case, the REN and RGN of the HP 3000 gateway system) to a specific APPC device. This allows messages destined for HP Desk to be directed to the proper connection and link.

The following fields must be configured in the Add Distribution Queue screen (`CFGDSTSRV` command) of the AS/400:

`Queue Name`	Identifies a connection to APPC. A distribution queue is used by one or more routing table entries for distributing mail to remote systems (in this case, the HP 3000).
`Queue Type`	Specifies the type of distribution queue. Enter *SNADS.
`Remote Location Name`	Must match the field of the same name configured for an APPC device.
`Mode Name`	Must match the field of the same name configured for an APPC device.
`Remote Net ID`	Must match the field of the same name configured for an APPC device.
`Local Location Name`	Must match the field of the same name configured for an APPC device.

Configuring the Routing Table

The routing table determines the communication route that is used to distribute documents to particular users at particular systems.

The following fields are used on the Add Routing Table Entry screen (`CFGDSTSRV` command).

`System Group`	Groups SNA/DS nodes for routing purposes. The system group name can be one to eight characters, an asterisk, or blank. All capital letters must be used when specifying the system group name.
`System Name`	Identifies a single node for routing purposes. The system name can be one to eight characters or an asterisk. All capital letters must be used when specifying the system name.
`Queue names`	Points to a particular distribution queue for each service level (that is, distribution priority). Each queue name must match a configured distribution queue name.

Note

If both the system name and group contain an asterisk, then all messages that have no matching system/group name combination are routed here.

Configuring SNA/DS Resident Users into HP Desk

The Worksheet for IBM SNA/DS Resident Users provides information that the HP SNADS/iX gateway administrator needs to configure AS/400 Office users into the HP Desk foreign address table.

Figure 6-2 shows an example of the configuration worksheet for IBM SNA/DS resident users.

Note

DEN, DGN, REN, and RGN are generic IBM SNA/DS terms that describe a user's fully-qualified IBM name in the SNA/DS network. In the AS/400 configuration, DEN is referred to as "user ID," DGN is "user address," REN is "system name," and RGN is "system group."

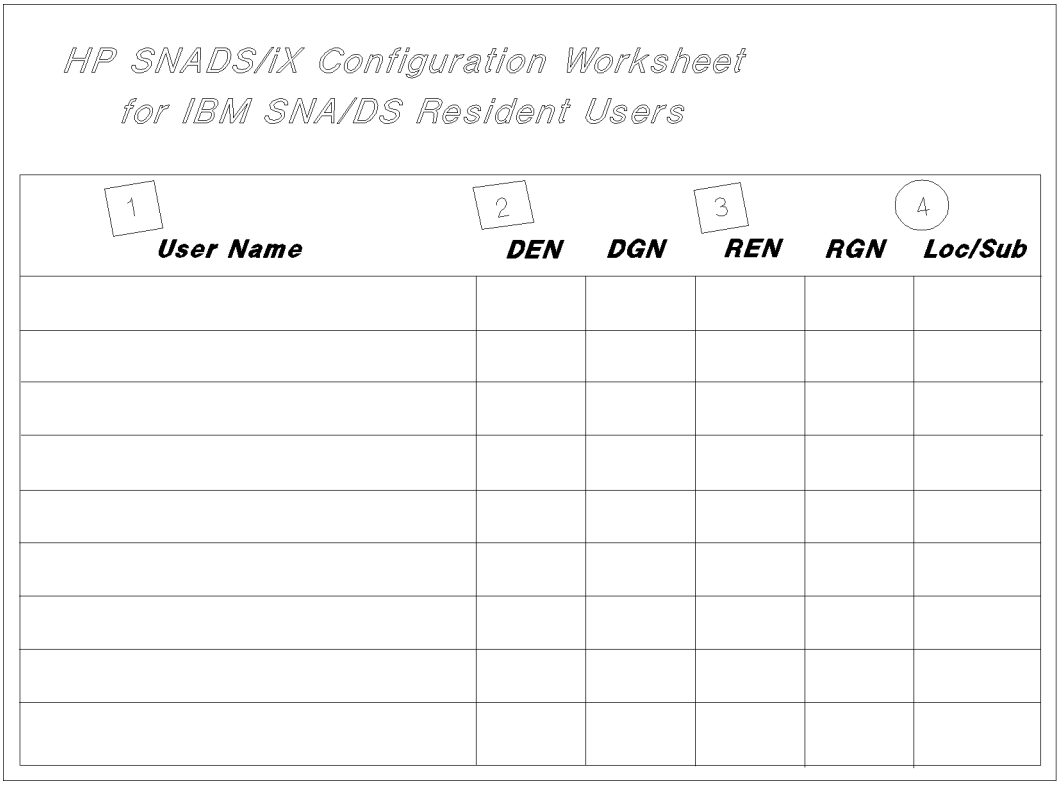


Figure 6-2. IBM SNA/DS Resident User Worksheet

The fields correspond to the numbers on the worksheet. Fields 1, 2, and 3 should be completed by the AS/400 system administrator. Field 4 should be completed by the HP SNADS/iX gateway administrator.

`Field 1: User Name` — Specifies the AS/400 user's name. This name should be obtained from a company wide directory or phone book.

`Field 2: DEN DGN` — Specifies the IBM SNA/DS address for the user name in field 1. **The DEN and DGN must be in all uppercase letters.**

`Field 3: REN RGN` — Specifies the REN (system name) and RGN (system group) for the DEN.DGN in field 2 or the REN.RGN for an IBM machine that supports SNA/DS redirection. All messages sent from

HP SNADS/iX to the DEN and DGN for a user will be sent to the REN and RGN specified for that user. The REN and RGN specified for a user must have the capability of forwarding a message to its final destination. **The REN and RGN must be in all uppercase letters.**

Note

After completing the above fields for each AS/400 Office user, the AS/400 system administrator should give the worksheet to the HP SNADS/iX gateway administrator to complete the remaining field.

`Field 4: Loc/Sub` Specifies the location and sublocation for each IBM SNA/DS resident user who will be addressed transparently.

The completed worksheet will provide all the information necessary for the HP SNADS/iX gateway administrator to configure the IBM SNA/DS resident users.

AS/400 Worksheets

At the end of this chapter are blank versions of the worksheets described previously in this chapter. Use copies of these worksheets to facilitate your configurations.

LU 6.2 API/iX Configuration

This section describes the AS/400 configuration parameters that must be specified in order for an HP 3000 to communicate in an APPN network. The HP 3000 uses LU 6.2 API/iX to act as a LEN node . The AS/400, configured as a Network Node, routes APPC sessions from the HP 3000 to other nodes in the APPN network.

Display Network Attributes

This portion of the AS/400 configuration describes the attributes of the APPN network.

`Local network ID` Must appear in the HP 3000 configuration as the first part of the `Fully Qualified Remote LU Name` in the APPC: Independent LU Session Type Data screen. If the AS/400 is in the same network as the HP 3000, the `Local network ID` must match the value of the HP 3000 `Local Network ID` field of the APPC: Network ID Data screen.

`APPN node type` Must be `*NETNODE`.

Display Mode Description

This portion of the AS/400 configuration describes the mode of communication between LUs in the network.

`LCLCTLSSN` (Locally controlled sessions) Must be `0`.

`INPACING` (Inbound pacing value) Must match the `Maximum Pacing Window (Send)` configured on the HP 3000 in the APPC: Mode Type Data screen.

`OUTPACING` (Outbound pacing value) Must match the `Maximum Pacing Window (Receive)` configured on the HP 3000 in the APPC: Mode Type Data screen.

`MAXLENRU` (Max length of request unit) Must match the value of the HP 3000 `Maximum RU Size (Send and Receive)` in the APPC: Mode Type Data screen.

APPN Configuration List

This portion of the AS/400 configuration lists the local and remote locations in the APPN network that cannot be dynamically configured.

Display Line Description

This portion of the AS/400 configuration describes the connection between the AS/400 and the HP 3000.

`ROLE` (Data link role) Must be `*PRI` (data link role for the AS/400).

`MAXFRAME` (Maximum frame size) Must match the `MAX DATA` value configured on the HP 3000 SNA Node Configuration: PU Data screen.

`LINESPEED` (Line speed) Must match the `Transmission Speed` value configured on the HP 3000 SNA Node Configuration: SDLC Link Data screen.

Display Controller Description

This portion of the AS/400 configuration describes the HP 3000 as a LEN node in the APPN network.

`RMTNETID` (Remote network identifier) If the AS/400 and the HP 3000 have different network IDs, this value must match the `Network ID` configured in the HP 3000 APPC: Network ID Data screen. If the AS/400 and the HP 3000 reside in the same network, this value can be specified as `*NETATTR`, which points to the Local network ID in the Network Attribute Table.

`EXCHID` (Exchange identifier) Must match the `ID BLK` and `ID NUM` values configured on the HP 3000 SNA Node Configuration: PU Data screen for dial-up lines.

`STNADR` (Station address) Must match the `Station ID` value configured on the HP 3000 SNA Node Configuration: SDLC Link Data screen.

`ROLE` (Data link role) Must be `*SEC` (data link role of HP 3000)

`NODETYPE` (APPN node type) Must be `*LENNODE`.

Display Device Description

This portion of the AS/400 configuration describes the devices used for program-to-program communications.

`RMTLOCNAME` (Remote location name) Must match the HP 3000 `Local LU Name` configured in the APPC: Independent LU Session Type Data screen.

`LCLLOCNAME` (Local location name) Must match the last part of the HP 3000 `Fully Qualified Remote LU Name` configured in the APPC: Independent LU Session Type Data screen.

`MODE` Must match the HP 3000 `Mode Name` configured for the LU in the APPC: Independent LU Session Type Data screen.

`SNGSSN` (Single session) Must complement the HP 3000 `Parallel Sessions` value configured for the LU in the APPC: Independent LU Session Type Data screen.

`LCLCTLSSN` (Locally controlled session) For the single-session device, the value must be `*NO`.

SNA/Token Ring/iX Configuration

This section describes the AS/400 configuration parameters that must be specified in order for the AS/400 to communicate with an HP 3000 on a token ring network.

Display Line Description

This portion of the AS/400 configuration describes the connection between the AS/400 and the HP 3000.

`MAXFRAME` (Maximum frame size) Must match the `MAX DATA` value configured on the HP 3000 SNA Node Configuration: PU Data screen.

`ADPTADR` (TRLAN local adapter address) Must match the `Remote Station Address` value configured on the HP 3000 SNA Node Configuration: Token Ring Link Data screen.

`SSAP` (TRLAN source service access points) Contains all source service access points available for this token ring line description.

Display Controller Description

This portion of the AS/400 configuration describes each HP 3000 as a node in the token ring network.

`EXCHID` (Exchange identifier) Must match the `ID BLK` and `ID NUM` values configured on the HP 3000 SNA Node Configuration: PU Data screen.

`DSAP` (TRLAN DSAP) Must match the `Local SSAP` value configured on the HP 3000 SNA Node Configuration: Token Ring Link Data screen.

`SSAP` (TRLAN source service access point) Must match the `Remote DSAP` value configured on the HP 3000 SNA Node Configuration: Token Ring Link Data screen.

`ADPTADR` (TRLAN remote adapter address) Must match the `Local Station Address` value configured on the HP 3000 SNA Node Configuration: Token Ring Link Data screen. Obtain this value from the HP 3000 system administrator.

`RMTCPNAME` (Remote control point name) Must match the `Local Control Point Name` on the HP 3000 SNA Node Configuration: PU Data screen in an APPN environment.

HP SNADS/IX Configuration
Worksheet for HP Desk Resident Users

4 HP DEN	HP DGN

5 HP REN	HP RGN

1 HPDesk User Name	2 Loc/Sub	6 DEN	DGN	3 Comment

HP SNADS/iX Configuration Worksheet
for IBM SNA/DS Resident Users

1 User Name	2 DEN	DGN	3 REN	RGN	4 Loc/Sub

A

VTAM Examples

This appendix contains sample VTAM configurations for HP peripheral nodes with HP's SNA products installed.

Each of these sample configurations is based on the following:

- ACF/NCP version 3, release 2
- ACF/VTAM version 3, release 2
- X.25 NPSI version 2, release 1 or later (for the IBM 3725)
- X.25 NPSI version 3 or later (for the IBM 3745)

Required parameters that have changed in later releases are documented in notes.

To ensure that the host configuration is compatible with HP's SNA products, there are values that HP *requires* for some operands. These values are noted in this chapter. Certain operands are required, but no specific value for the operand is required.

Required parameters must be coded as specified. Variable parameters must be set within the constraints defined by HP and the host.

Caution

HP requires that the host be configured as defined in chapter 1 of this manual. Any HP time spent solving problems related to incorrect configuration of the host is billable to the customer on a time and materials basis.

The configuration listings must be available for your HP representative in case your installation requires servicing.

SNA NRJE Configuration Example

This example defines a network with SNA NRJE as shown in figure A-1. Each of these HP 3000s is defined as an NRJE workstation.

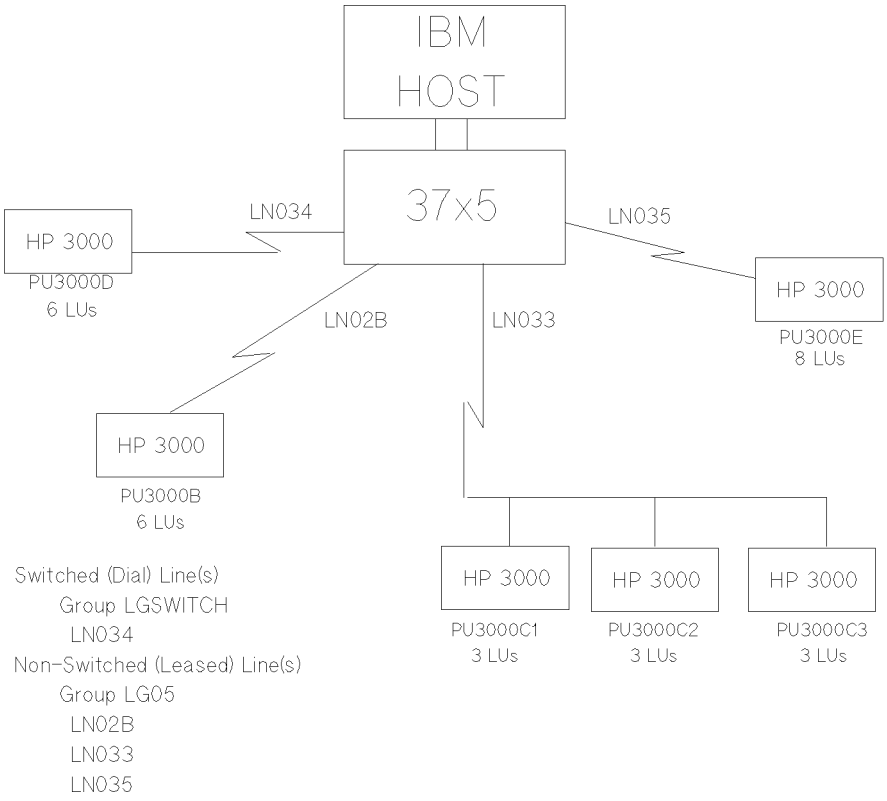


Figure A-1. SNA NRJE Example Network

```
*****************************************************************
*
LG05      GROUP DIAL=NO,
                LNCTL=SDLC,
                REPLYTO=1.0,
                TEXTTO=1.0,
                TYPE=NCP,
*****************************************************************
* LINE OPERANDS MOVED UP TO THE GROUP MACRO
*****************************************************************
                CLOCKNG=EXT,
                DATRATE=HIGH,
                ETRATIO=30,
                HDXSP=NO,
                INTPRI=1,
                LPDATS=NO,
                NRZI=NO,
                POLLED=YES,
```

```
               SPDSEL=NO,
               TRANSFR=12,
*********************************************************************
* PU OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
               IRETRY=NO,
               MAXDATA=265,
               MAXOUT=3,
               PASSLIM=7,
               PUTYPE=2,
               SRT=(32768,32768),
*********************************************************************
* LU OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
               BATCH=NO,
               DLOGMOD=MODENRJE,
               ISTATUS=ACTIVE,
               MODETAB=HPMODTAB,
               PACING=(3,1),
               SSCPFM=FSS,
               VPACING=2
*    Point to point (leased) low speed line.
*
*
LN02B   LINE ADDRESS= 02B,
             SPEED=4800,
             DUPLEX=HALF,
             MAXPU=1
*
SERV300B SERVICE ORDER =(PU3000B)
*
PU3000B PU ADDR =C1
*
LU30002B LU LOCADDR =2
*
LU30003B LU LOCADDR =3
*
LU30004B LU LOCADDR =4
*
LU30005B LU LOCADDR =5
*
LU30006B LU LOCADDR =6
*
LU30007B LU LOCADDR =7
*
*   Multi-drop line with three drops
*
```

```
LN033   LINE  ADDRESS =033,
              SPEED=9600,
              DUPLEX=FULL,
              MAXPU=3
*
*
SERV300C SERVICE ORDER =(PU3000C1,PU3000C2,PU3000C3)
*
PU3000C1 PU ADDR =C1
*
LU30C102 LU LOCADDR =2
*
LU30C103 LU LOCADDR =3
*
LU30C104 LU LOCADDR =4
*
*
*
PU3000C2 PU ADDR =C2
*
LU30C202 LU LOCADDR =2
*
LU30C203 LU LOCADDR =3
*
LU30C204 LU LOCADDR =4
*
*
*
PU3000C3 PU ADDR =C3
*
LU30C302 LU LOCADDR =2
*
LU30C303 LU LOCADDR =3
*
LU30C304 LU LOCADDR =4
*
* Point to point line.
*
LN035   LINE  ADDRESS =035,
              SPEED =9600,
              DUPLEX=FULL,
              MAXPU=1
*
*
SERV300E SERVICE ORDER =(PU3000E)
*
*
```

```
PU3000E PU ADDR =C1
*
LU30002E LU LOCADDR =2
*
LU30003E LU LOCADDR =3
*
LU30004E LU LOCADDR =4
*
LU30005E LU LOCADDR =5
*
LU30006E LU LOCADDR =6
*
LU30007E LU LOCADDR =7
*
LU30008E LU LOCADDR =8
*
LU30009E LU LOCADDR =9
```

Note

The **POLLED=YES** parameter is required by a PU type 2 for ACF/NCP version 1, releases 1 and 2. This parameter is invalid for an SDLC line for ACF/NCP version 1, release 3 and later versions.

```
*****************************************************************
********************** HP3000 DIAL UP ***************************
*
*The following example shows a line GROUP that defines a switched
*line. The VTAM operands of the PU macros, and the LU macros, are
*defined under a VBUILD macro, which is kept as a separate member
*in SYS1.VTAMLST, the parameter library for VTAM.
*
*****************************************************************
LUDRPOOL NUMTYPE2=6
LGSWITCH GROUP DIAL=YES,
               LNCTL=SDLC,
               REPLYTO=1.0,
               TEXTTO=1.0,
               TYPE=NCP
*****************************************************************
* LINE MACRO DEFINITION FOR SWITCHED SDLC LINE
*****************************************************************
LN034    LINE ADDRESS =034,
              SPEED =9600,
              ANSWER=ON,
              CALL=IN,
              CLOCKNG=EXT,
              DATRATE=HIGH,
              DUPLEX=HALF,
              ETRATIO=30,
              HDXSP=NO,
              INTPRI=1,
              LPDATS=NO,
              MAXPU=1,
              NRZI=NO,
              POLLED=YES,
              SPDSEL,
              TRANSFR=12
*
*
*     No SERVICE macro because it is not allowed on switched lines.
*
*****************************************************************
* PU MACRO DEFINITION FOR SWITCHED SDLC LINE
*****************************************************************
*
*
PU3000D  PU   MAXLU=6,
              PUTYPE=2
* All other PU parameters and LU parameters are defined in the
* VBUILD member for this PU.
```

```
*
NCPEND          GENEND SCANCTL=(2,,,,1100)
                END
```

Note

The **POLLED=YES** parameter is required by a PU type 2 for ACF/NCP version 1, releases 1 and 2. This parameter is invalid for an SDLC line for ACF/NCP version 1, release 3 and later versions.

Switched Major Node

The following is an example of the PU and LU definitions in a switched major node that could use the switched (dial) line LN034 under group LGSWITCH.

```
SW3000D   VBUILD TYPE=SWNET  THIS MEMBER DEFINES A SWITCHED MAJOR
NODE
*
*
PU3000D PU  ADDR= C4
            IDBLK=023,
            IDNUM= 01234,
            MAXLU=6,
            PUTYPE=2,
            SRT=(32768,32768),
            BATCH=YES,
            DLOGMOD=MODENRJE,
            ISTATUS=INACTIVE,
            MODTAB=HPMODTAB,
            PACING=(3,1),
            SSCPFM=FSS,
            VPACING=(2,1)
*
LU30002D LU LOCADDR =2
*
LU30003D LU LOCADDR =3
*
LU30004D LU LOCADDR =4
*
LU30005D LU LOCADDR =5
*
LU30006D LU LOCADDR =6
*
LU30007D LU LOCADDR =7
```

SNA IMF Configuration Example

This example defines a network with SNA IMF as shown in figure A-2.

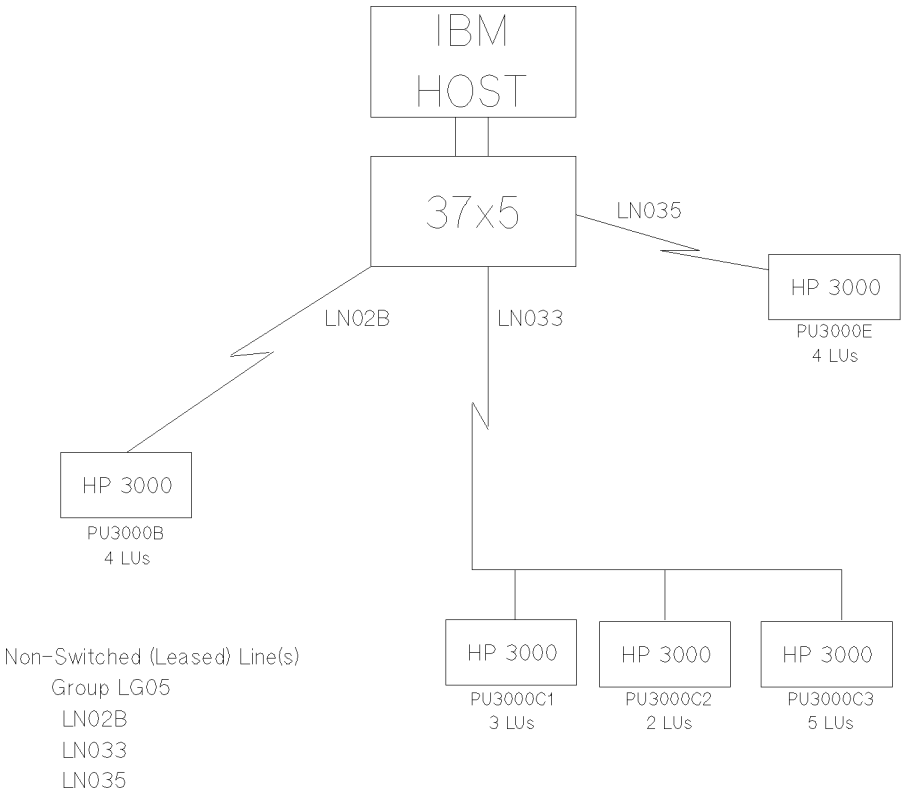


Figure A-2. SNA IMF Example Network

```
**********************************************************************
LG05    GROUP DIAL=NO,
              LNCTL=SDLC,
              REPLYTO=1.0,
              TEXTTO=1.0,
              TYPE=NCP,
**********************************************************************
* LINE OPERANDS MOVED UP TO THE GROUP MACRO
**********************************************************************
              CLOCKNG=EXT,
              DATRATE=HIGH,
              ETRATIO=30,
              HDXSP=NO,
              INTPRI=1,
              LPDATS=NO,
              NRZI=NO,
              POLLED=YES,
              SPDSEL=NO,
              TRANSFR=12,
```

```
*********************************************************************
* PU OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
             IRETRY=NO,
             MAXDATA=265,
             MAXOUT=3,
             PASSLIM=7,
             PUTYPE=2,
             SRT=(32768,32768),
*********************************************************************
* LU OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
             BATCH=NO,
             DLOGMOD=MODEIMF,
             ISTATUS=ACTIVE,
             MODETAB=HPMODTAB,
             PACING=0,
             SSCPFM=USSSCS,
             VPACING=0,
             USSTAB= USSTBL
*    Point to point (leased) low speed line.
*
*
LN02B   LINE  ADDRESS =02B,
             SPEED=4800,
             DUPLEX=HALF,
             MAXPU=1
*
SERV300B SERVICE ORDER =(PU3000B)
*
PU3000B PU ADDR =C1
*
LU30002B LU LOCADDR =2
*
LU30003B LU LOCADDR =3
*
LU30004B LU LOCADDR =4
*
LU30005B LU LOCADDR =5
*   Multi-drop line with three drops
*
LN033   LINE  ADDRESS =033,
             SPEED=9600,
             DUPLEX=FULL,
             MAXPU=3
*
*
```

```
SERV300C SERVICE ORDER =(PU3000C1,PU3000C2,PU3000C3)
*
*
PU3000C1 PU ADDR =C1
*
LU30C102 LU LOCADDR =2
*
LU30C103 LU LOCADDR =3
*
LU30C104 LU LOCADDR =4
*
*
PU3000C2 PU ADDR =C2
*
LU30C202 LU LOCADDR =2
*
LU30C203 LU LOCADDR =3
*
*
PU3000C3 PU ADDR =C3
*
LU30C302 LU LOCADDR =2
*
LU30C303 LU LOCADDR =3
*
LU30C304 LU LOCADDR =4
*
LU30C305 LU LOCADDR =5
*
LU30C306 LU LOCADDR =6
*
* Point to point line.
*
LN035   LINE  ADDRESS =035,
              SPEED =9600,
              DUPLEX=FULL,
              MAXPU=1
*
*
SERV300E SERVICE ORDER =(PU3000E)
*
*
PU3000E PU ADDR =C1
*
LU30002E LU LOCADDR =2
*
LU30003E LU LOCADDR =3
```

```
*
LU30004E LU LOCADDR =4
*
LU30005E LU LOCADDR =5
```

Note

The **POLLED=YES** parameter is required by a PU type 2 for ACF/NCP version 1, releases 1 and 2. This parameter is invalid for an SDLC line for ACF/NCP version 1, release 3 and later versions.

LU 6.2 API Configuration Example

This example defines a network with LU 6.2 API as shown in figure A-3.

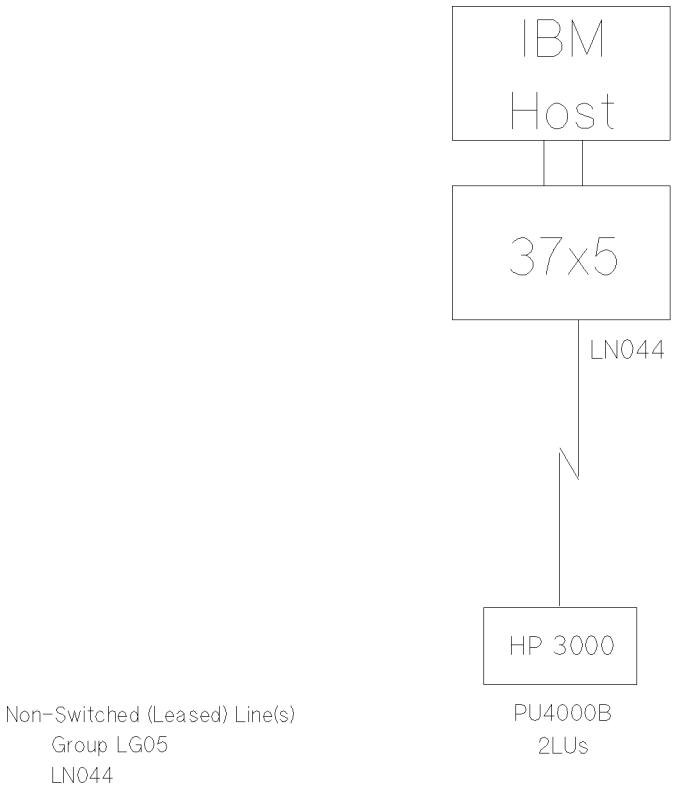


Figure A-3. LU 6.2 API Example Network

```
*********************************************************************
*
LG05    GROUP DIAL=NO,
              LNCTL=SDLC,
              REPLYTO=1.0,
              TEXTTO=1.0,
              TYPE=NCP,
*********************************************************************
* LINE OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
              CLOCKNG=EXT,
              DATRATE=HIGH,
              ETRATIO=30,
              HDXSP=NO,
              INTPRI=1,
              LPDATS=NO,
              NRZI=NO,
              POLLED=YES,
              SPDSEL=NO,
```

```
              TRANSFR=12,
*********************************************************************
* PU OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
              IRETRY=NO,
              MAXDATA=265,
              MAXOUT=3,
              PASSLIM=7,
              PUTYPE=2,
              SRT=(32768,32768),
*********************************************************************
* LU OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
              BATCH=NO,
              DLOGMOD=MODE62,
              ISTATUS=ACTIVE,
              MODETAB=HPMODTAB,
              PACING=(3,1),
              SSCPFM=FSS,
              VPACING=2
*    Point to point (leased) low speed line.
*
*
LN044   LINE  ADDRESS =044,
              SPEED=4800,
              DUPLEX=HALF,
              MAXPU=1
*
SERV400B SERVICE ORDER =(PU4000B)
*
PU4000B PU ADDR =C1
*
LU40002B LU LOCADDR =2
*
LU40003B LU LOCADDR =3
*
```

Note

The **POLLED=YES** parameter is required by a PU type 2 for ACF/NCP version 1, releases 1 and 2. This parameter is invalid for an SDLC line for ACF/NCP version 1, release 3 and later versions.

SNA NRJE, SNA IMF, & LU 6.2 API Configuration Example

This example defines a network with SNA NRJE, SNA IMF, SNA DHCF/iX and LU 6.2 API as shown in figure A-4.

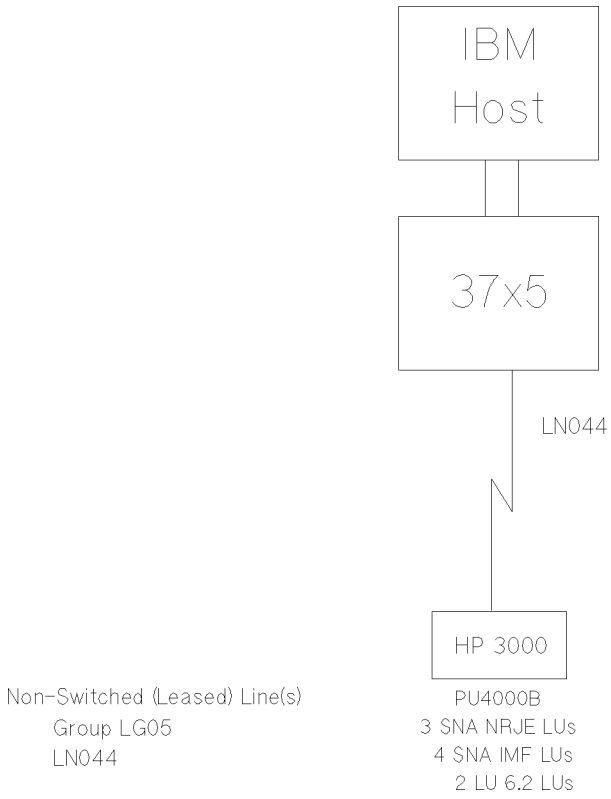


Figure A-4. SNA NRJE/SNA IMF/LU 6.2 Example Network

```
**********************************************************************
*
LG05    GROUP DIAL=NO,
              LNCTL=SDLC,
              REPLYTO=1.0,
              TEXTTO=1.0,
              TYPE=NCP,
**********************************************************************
* LINE OPERANDS MOVED UP TO THE GROUP MACRO
**********************************************************************
              CLOCKNG=EXT,
              DATRATE=HIGH,
              ETRATIO=30,
              HDXSP=NO,
              INTPRI=1,
              LPDATS=NO,
              NRZI=NO,
              POLLED=YES,
```

```
              SPDSEL=NO,
              TRANSFR=12,
*********************************************************************
* PU OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
              IRETRY=NO,
              MAXDATA=265,
              MAXOUT=3,
              PASSLIM=7,
              PUTYPE=2,
              SRT=(32768,32768),
*********************************************************************
* LU OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
              BATCH=NO,
              ISTATUS=ACTIVE,
              PACING=(3,1),
              VPACING=2
LN044 LINE    ADDRESS =044,
              SPEED=9600,
              DUPLEX=FULL,
              MAXPU=1
*
*
SERV400C SERVICE ORDER =(PU4000C1)
*
PU4000C1 PU   ADDR =C1
*
*   There are 3 SNA NRJE LUs, 4 SNA IMF LUs,
*    and 2 LU 6.2 API LUs on this PU.
*
*
LU40C102 LU   LOCADDR =2,
              MODETAB=HPMODTAB,
              DLOGMOD=MODENRJE,
              SSCPFM=FSS
*
LU40C103 LU   LOCADDR =3,
              MODETAB=HPMODTAB,
              DLOGMOD=MODENRJE,
              SSCPFM=FSS
*
LU40C104 LU   LOCADDR =4,
              MODETAB=HPMODTAB,
              DLOGMOD=MODENRJE,
              SSCPFM=FSS
*
```

```
LU40C105 LU   LOCADDR =5,
              MODETAB=HPM0DTAB,
              DLOGMOD=M0DEIMF,
              SSCPFM=USSSCS
*
LU40C106 LU   LOCADDR =6,
              MODETAB=HPM0DTAB,
              DLOGMOD=M0DEIMF,
              SSCPFM=USSSCS
*
LU40C107 LU   LOCADDR =7,
              MODETAB=HPM0DTAB,
              DLOGMOD=M0DEIMF,
              SSCPFM=USSSCS
*
LU40C108 LU   LOCADDR =8,
              MODETAB=HPM0DTAB,
              DLOGMOD=M0DEIMF,
              SSCPFM=USSSCS
*
LU40C109 LU   LOCADDR =9
*
LU40C110 LU   LOCADDR =10
*
LU40C111 LU   LOCADDR =11
*
LU40C112 LU   LOCADDR =12
*
LU40C113 LU   LOCADDR =13
              MODETAB=HPM0DTAB,
              DLOGMOD=M0DE62,
              SSCPFM=FSS
*
LU40C114 LU   LOCADDR =14,
              MODETAB=HPM0DTAB,
              DLOGMOD=M0DE62,
              SSCPFM=FSS
```

Note

The **POLLED=YES** parameter is required by a PU type 2 for ACF/NCP version 1, releases 1 and 2. This parameter is invalid for an SDLC line for ACF/NCP version 1 release 3 and later versions.

HP SNADS/iX Configuration Example

This example defines a network with HP SNADS/iX as shown in figure A-5.

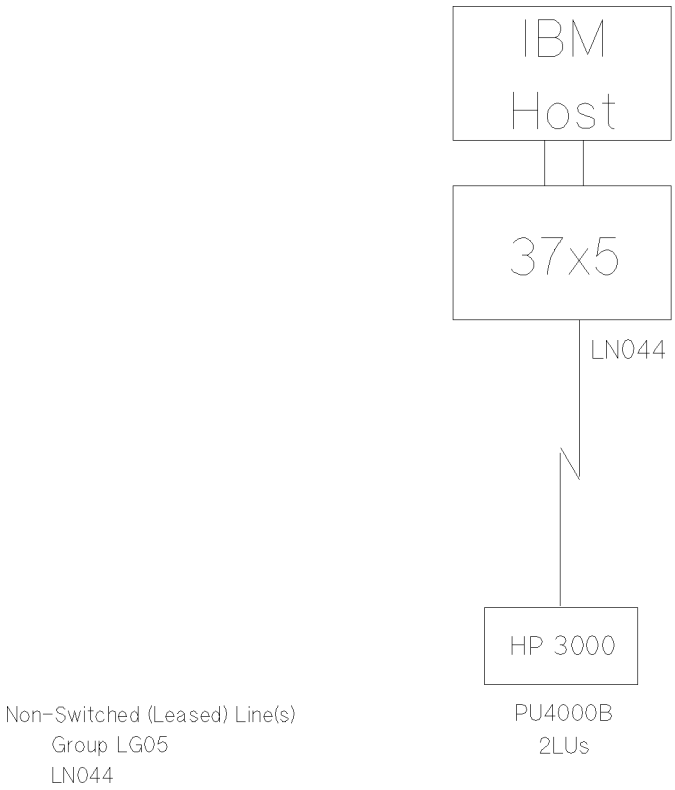


Figure A-5. HP SNADS/iX Example Network

```
*********************************************************************
*
LG05    GROUP DIAL=NO,
              LNCTL=SDLC,
              REPLYTO=1.0,
              TEXTTO=1.0,
              TYPE=NCP,
*********************************************************************
* LINE OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
              CLOCKNG=EXT,
              DATRATE=HIGH,
              ETRATIO=30,
              HDXSP=NO,
              INTPRI=1,
              LPDATS=NO,
              NRZI=NO,
              POLLED=YES,
              SPDSEL=NO,
```

```
              TRANSFR=12,
*********************************************************************
* PU OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
              IRETRY=NO,
              MAXDATA=265,
              MAXOUT=3,
              PASSLIM=7,
              PUTYPE=2,
              SRT=(32768,32768),
*********************************************************************
* LU OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
              BATCH=NO,
              DLOGMOD=MODE62,
              ISTATUS=ACTIVE,
              MODETAB=HPMODTAB,
              PACING=(3,1),
              SSCPFM=FSS,
              VPACING=2
*    Point to point (leased) low speed line.
*
*
LN044    LINE  ADDRESS =044,
               SPEED=4800,
               DUPLEX=HALF,
               MAXPU=1
*
SERV400B SERVICE ORDER =(PU4000B)
*
PU4000B PU ADDR =C1
*
LU40002B LU LOCADDR =2
*
LU40003B LU LOCADDR =3
*
```

Note

The **POLLED=YES** parameter is required by a PU type 2 for ACF/NCP version 1, releases 1 and 2. This parameter is invalid for an SDLC line for ACF/NCP version 1, release 3 and later versions.

SNA DHCF/iX Configuration Example

This example defines a network with DHCF/iX as shown in figure A-6. The network illustration and the example host gen reflect the connections between SNA and BSC devices, and HCF. For cluster control unit configuration information, refer to the IBM manuals for the control unit being configured.

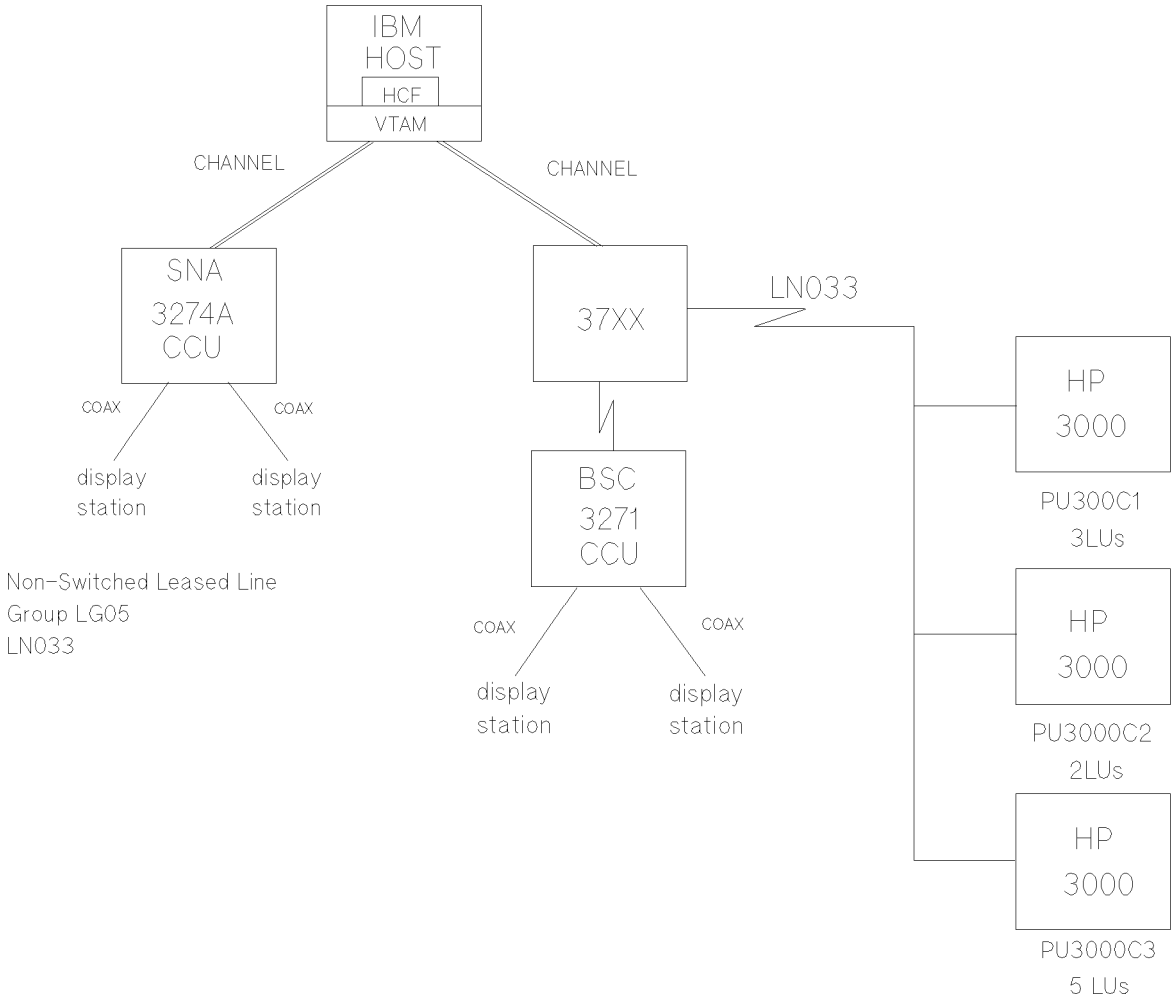


Figure A-6. SNA DHCF/iX Example Network

Host Configuration for HP 3000

This example shows the portion of the NCP gen defining the HP 3000s.

```
*********************************************************************
LG05     GROUP DIAL=NO,
               LNCTL=SDLC,
               REPLYTO=1.0,
               TEXTTO=1.0,
               TYPE=NCP,
*********************************************************************
* LINE OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
               CLOCKNG=EXT,
               DATRATE=HIGH,
               ETRATIO=30,
               HDXSP=NO,
               INTPRI=1,
               LPDATS=NO,
               NRZI=NO,
               POLLED=YES,
               SPDSEL=NO,
               TRANSFR=12,
*********************************************************************
* PU OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
               IRETRY=NO,
               MAXDATA=265,
               MAXOUT=3,
               PASSLIM=7,
               PUTYPE=2,
               SRT=(32768,32768),
*********************************************************************
* LU OPERANDS MOVED UP TO THE GROUP MACRO
*********************************************************************
               BATCH=NO,
               ISTATUS=ACTIVE,
               PACING=(3,1),
               SSCPFM=FSS,
               VPACING=2
*   Multi-drop line with three drops
*
LN033    LINE  ADDRESS =033,
               SPEED=9600,
               DUPLEX=FULL,
               MAXPU=3
*
*SERV300C SERVICE ORDER= (PU3000C1,PU3000C2,PU3000C3)
```

```
*
PU3000C1 PU     ADDR =C1
*
LU30C102 LU     LOCADDR =2
*
LU30C103 LU     LOCADDR =3
*
LU30C104 LU     LOCADDR =4
*
*
PU3000C2 PU     ADDR =C2
*
LU30C202 LU     LOCADDR =2
*
LU30C203 LU     LOCADDR =3
*
PU3000C3 PU     ADDR =C3
*
LU30C302 LU      LOCADDR =2
*
LU30C303 LU      LOCADDR =3
*
LU30C304 LU      LOCADDR =4
*
LU30C305 LU      LOCADDR =5
*
LU30C306 LU      LOCADDR =6
```

Note

The **POLLED=YES** parameter is required by a PU type 2 for ACF/NCP version 1, releases 1 and 2. This parameter is invalid for an SDLC line for ACF/NCP version 1 release 3 and later versions.

Host Configuration for IBM 3270 Terminals

This example shows a portion of the VBUILD table definition for two locally attached SNA display stations. Note that a standard IBM logmode entry is used for the IBM 3270 Model 2 display station.

```
*********************************************************************
*
*  IBM 3274A Cluster Controller attached terminals
*
SNAPU    PU ............
*
*  THE STANDARD IBM LOGMODE ENTRY CAN BE USED FOR 3270 MODEL 2
TERMINALS
*
SNALU24  LU  LOCADDR=2,
             DLOGMODE=D4A32782
*
* THE STANDARD IBM LOGMODE ENTRIES FOR IBM 3270 MODEL 4 TERMINALS
* WILL NOT WORK BECAUSE HCF USES THE PRIMARY SCREEN SIZE AND
* NOT THE ALTERNATE. THIS MODIFIED LOGMODE ENTRY CHANGES THE
* PRIMARY SCREEN SIZE IN THE PSERVIC FIELD TO 43 X 80
*
SNALU43  LU  LOCADDR=3,
             DLOGMODE=DHCF3440
*
```

This example shows a portion of the NCP gen defining a remote attached BSC display station. Note that a standard IBM logmode entry is used.

```
*********************************************************************
*
*  IBM 3271 Cluster Controller attached terminals
*
BSCCTLR CLUSTER CUTYPE=3271, GPOLL=40407F7F
*
* THE STANDARD IBM LOGMODE ENTRY CAN BE USED FOR ALL SUPPORTED
* BSC ATTACHED TERMINALS
*
BSCTERMI  TERM  TERM=3277,ADDR=60604040,POLL40404040,
                DLOGMODE=D4B32782,FEATUR2=MODEL2
```

SNA Services using SNA/X.25 iX Configuration Example

This example defines a network with LU 6.2 API, SNA IMF, and SNA NRJE using SNA/X.25 as shown in figure A-7.

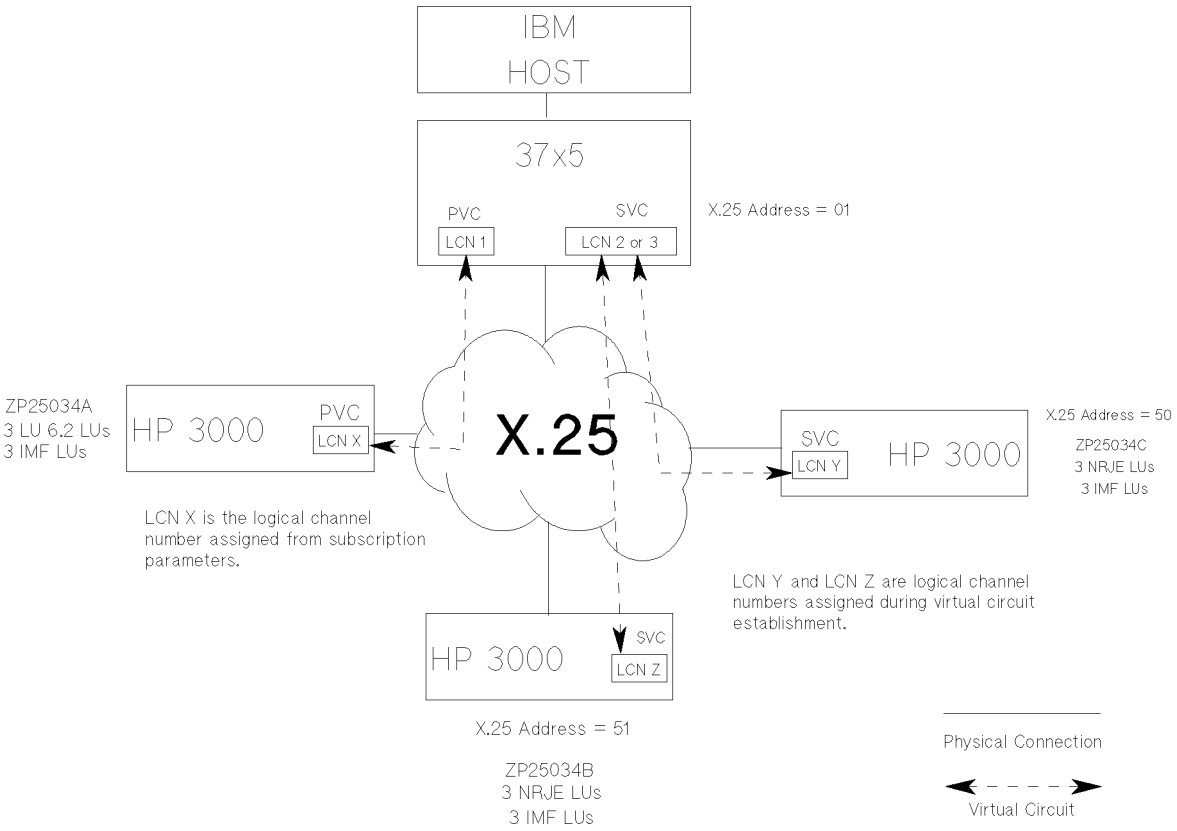


Figure A-7. SNA/X.25 Link/iX Example Network

```
*********************************************************************
*********              BUILD STATEMENT          ******************
*
*The following lines from the BUILD statement are required by
*X.25 NPSI. They do not represent a complete BUILD statement.
*
*********************************************************************
P38X25 BUILD  X25.MAXPIU=1296,
              X25.MCHCNT=1,
              X25.MWINDOW=7,
              X25.PREFIX=Z,
              X25.SNAP=YES,
              X25.USGTIER=3
*********************************************************************
*********                 X.25 NETWORK          ******************
*
*The following code defines an X.25 Network to X.25 NPSI.
*in SYS1.VTAMLST, the parameter library for VTAM.
*
*********************************************************************
*
      X25.NET CPHINDX=2,
              OUHINDX=2
*
    X25.VCCPT INDEX=1,
              MAXPKL=128,
              INSLOW=(25,0),
              VWINDOW=7
    X25.VCCPT INDEX=2,
              MAXPKL=128,
              INSLOW=(25,0),
              VWINDOW=7
*
     X25.OUFT INDEX=1,
              OPTFACL=420707430202,
     X25.OUFT INDEX=2,
              OPTFACL=420707430707
*
      X25.MCH ADDRESS=034,
              FRMLGTH=131,
              LCGDEF=0(9),
              MWINDOW=7,
              ANS=CONT,
              GATE=NO,
              LCNO=NOTUSED,
              LLCLIST=LLC3,
              PKTMODL=8,
```

```
              SPEED=9600,
              STATION=DTE,
              TDTIMER=1,
              TPTIMER=1.0,
              TRAN=NO
*
      X25.LCG LCGN=0
*
ZL25034A X25.LINE LCN=1,
              VCCINDX=1,
              LLC=LLC3,
              TYPE=PERMANENT,
              DSTNODE=BNN
*
ZP25034A X25.PU PUTYPE=2,
              ADDR=01,
              ISTATUS=ACTIVE,
              MODETAB=HPMODTAB,
              IRETRY=YES,
              MAXDATA=521,
              MAXOUT=7,
              PASSLIM=7
*
ZU2534A1 X25.LU LOCADDR=2,
              DLOGMOD= MODE62
*
ZU2534A2 X25.LU LOCADDR=3,
              DLOGMOD= MODE62
*
ZU2534A3 X25.LU LOCADDR=4,
              DLOGMOD= MODE62
*
ZU2534A4 X25.LU LOCADDR=5,
              DLOGMOD= MODEIMF
*
ZU2534A5 X25.LU LOCADDR=6,
              DLOGMOD= MODEIMF
*
ZU2534A6 X25.LU LOCADDR=7,
              DLOGMOD= MODEIMF
************************************************
* The following section defines an SVC using the   *
* X25.LINE and X25.PU macros.                      *
************************************************
ZL25034B X25.LINE LCN=2,
               VCCINDX=2,
               TYPE=SWITCHED,
```

```
                CALL=IN,
                OUFINDX=1,
                DSTNODE=BNN
*
ZP25034B X25.PU PUTYPE=2,
                MAXLU=16
************************************************
* The following section defines an SVC using the   *
* X25.VC macro.                                    *
************************************************
ZL25034C X25.VC LCN=3,
                VCCINDX=2,
                TYPE=SWITCHED,
                CALL=IN,
                OUFINDX=2
```

Switched Major Node

The following is an example of the PU and LU definitions in a switched major node that could use the switched (dial) line LN046 defined under group LG06.

```
SW3000D   VBUILD TYPE=SWNET  THIS MEMBER DEFINES A SWITCHED MAJOR
NODE

*
*
ZP25034B PU     IDBLK=023,
                IDNUM= 01234,
                MAXLU=7,
                PUTYPE=2,
                BATCH=NO,
                ISTATUS=ACTIVE,
                MODTAB=HPMODTAB,
                PACING=(3,1),
                VPACING=(2,1)
*
XPATHB    PATH USE=NO,
                GRPNM= S0
                PID=3
*
*
ZU2534B1 LU     LOCADDR=2,
                SSCPFM=FSS,
                DLOGMOD=MODENRJE
ZU2534B2 LU     LOCADDR=3,
                SSCPFM=FSS,
                DLOGMOD=MODENRJE
ZU2534B3 LU     LOCADDR=4,
```

```
                SSCPFM=FSS,
                DLOGMOD=MODENRJE
ZU2534B4 LU     LOCADDR=5,
                SSCPFM=USSSCS,
                DLOGMOD=MODE62
ZU2534B5 LU     LOCADDR=6,
                SSCPFM=USSSCS,
                DLOGMOD=MODE62
ZU2534B6 LU     LOCADDR=7,
                SSCPFM=USSSCS,
                DLOGMOD=MODE62
*
*
ZP25034C PU     IDBLK=023,
                IDNUM= 12345,
                MAXLU=7,
                PUTYPE=2,
                BATCH=NO,
                ISTATUS=ACTIVE,
                MODTAB=HPMODTAB,
                PACING=(3,1),
                VPACING=(2,1)
*
XPATHC    PATH  USE=NO,
                DIALNO= 51*0130001,
                GRPNM= S0
                PID=3
*
*
ZU2534C1 LU     LOCADDR=2,
                SSCPFM=FSS,
                DLOGMOD=MODENRJE
ZU2534C2 LU     LOCADDR=3,
                SSCPFM=FSS,
                DLOGMOD=MODENRJE
ZU2534C3 LU     LOCADDR=4,
                SSCPFM=FSS,
                DLOGMOD=MODENRJE
ZU2534C4 LU     LOCADDR=5,
                SSCPFM=USSSCS,
                DLOGMOD=MODEIMF
ZU2534C5 LU     LOCADDR=6,
                SSCPFM=USSSCS,
                DLOGMOD=MODEIMF
ZU2534C6 LU     LOCADDR=7,
                SSCPFM=USSSCS,
                DLOGMOD=MODEIMF
```

NTRI Example

This example shows an NCP configuration for a token ring connection and the corresponding switched major node definition.

```
*********************************************************************
*                  *** LUDRPOOL ***                                 *
* THIS DEFINITION STATEMENT SPECIFIES POOLS OF EMPTY LUCB'S          *
* WHILE USING DYNAMIC RECONFIGURATION OR SWITCHED SDLC LINKS.        *
*********************************************************************
     LUDRPOOL NUMTYP2=150,        ADD 50 FOR TOKEN RING NODES     T
              NUMILU=150
*
*********************************************************************
*                    *** GROUP: TRN1GRP ***                         *
*                                                                   *
* THE FOLLOWING DEFINITIONS ARE FOR THE TOKEN RING INTERFACE CARD   *
* THE FIRST GROUP DEFINITION IS THE PHYSICAL GROUP DEFINITION.      *
* THIS IS FOLLOWED BY THE LOGICAL GROUP DEFINITION OF THE SAME      *
* PHYSICAL TIC. BOTH PHYSICAL AND LOGICAL GROUP DEFINITIONS         *
* REQUIRE THEIR OWN PU AND LU DEFINITIONS.                          *
*********************************************************************
TRN1PGRP GROUP ECLTYPE=(PHYSICAL,PERIPHERAL), PERIPHERAL NODE ONLY  T
               COMPSWP=NO,       NOT ELIGIBLE FOR TIC SWAP          T
               DIAL=NO,           MUST BE NO FOR PHYSICAL LINE       T
               LNCTL=SDLC,        LINE TYPE.                         T
               OWNER=INDMVS,      VTAM ID THAT OWNS LINE.            T
               TYPE=NCP           NCP MODE ONLY FOR THIS GROUP.
*
*
*
*
TR1PLIN1 LINE ADAPTER=TIC2,         TYPE OF TRA ATTACHED              T
              ADDRESS=(1088,FULL), FOR THE 1ST PORT ON THE TIC       T
              PORTADD=1,           PORT FOR THIS LINE                T
              LOCADD=400013745101, TOKEN RING ADDRESS                T
              RCVBUFC=4095,        RECEIVE BUFFER FOR DATA FROM TR   T
              MAXTSL=1108,          LARGEST PIU NTRI CAN TRANSMIT    T
              TRSPEED=4             4MB PER SECOND RING
*
* TR1PPU1 PU
* TR1PLU1 LU
*
*********************************************************************
*                     *** GROUP: TR1LGRP ***                        *
*                                                                   *
* THE FOLLOWING DEFINITIONS ARE FOR THE TOKEN RING INTERFACE CARD   *
```

```
* THIS IS THE LOGICAL DEFINITION OF TOKEN RING ADAPTER 1 PORT 1   *
*                                                                 *
*******************************************************************
TR1LGRP GROUP ECLTYPE=(LOGICAL,PERIPHERAL),PERIPHERAL NODE ONLY  T
              DIAL=YES,        PAGE ES OR NCP CAN INITIATE       T
              PHYPORT=1       MATCH TO PORTADD ABOVE
*
TR1LLIN1 LINE  AUTOCOPY=(2,TR1LLIN2)
TR1LPU1  PU    NEXT=(TR1LPU2)
         ENDAUTO
*
*
                    VTAM Switched Major node for 3745 TRN
TRN3745 VBUILD TYPE=SWNET
*
TR1LPU1 PU ADDR=10,
             USSTAB=HPUSSTAB,MODETAB=HPMODTAB,ISTATUS=ACTIVE,
             IDBLK=017,IDNUM=DCA01,ANS=CONT,PUTYPE=2, XID=YES,
             DISCNT=NO,MAXDATA=265,MAXOUT=1,VPACING=0
*
TIC1LU11 LU LOCADDR=2,DLOGMOD=HPM2X
TIC1LU12 LU LOCADDR=3,DLOGMOD=HPM2X
TIC1LU13 LU LOCADDR=4,DLOGMOD=HPM2X
TIC1LU14 LU LOCADDR=5,DLOGMOD=HPM2X
TIC1LU15 LU LOCADDR=6,DLOGMOD=HPM2X
*
TR1LPU2 PU ADDR=11,
             USSTAB=HPUSSTAB,MODETAB=HPMODTAB,ISTATUS=INACTIVE,
             IDBLK=017,IDNUM=DCA02,ANS=CONT,PUTYPE=2,XID=YES,
             DLOGMOD=D4B32784,
             DISCNT=NO,MAXDATA=265,MAXOUT=1,VPACING=0
*
TIC1LU21 LU LOCADDR=2
TIC1LU22 LU LOCADDR=3
TIC1LU23 LU LOCADDR=4
TIC1LU24 LU LOCADDR=5
TIC1LU25 LU LOCADDR=6
*
TR1LPU3 PU ADDR=12,                                              X
            USSTAB=HPUSSTAB,MODETAB=HPMODTAB,ISTATUS=INACTIVE,   X
            IDBLK=017,IDNUM=DCA03,ANS=CONT, PUTYPE=2,XID=YES     X
            DLOGMOD=D4B32784,                                    X
            DISCNT=NO,MAXDATA=265,MAXOUT=1,VPACING=0
*
TIC1LU31 LU LOCADDR=2
TIC1LU32 LU LOCADDR=3
TIC1LU33 LU LOCADDR=4
```

```
TIC1LU34 LU LOCADDR=5
TIC1LU35 LU LOCADDR=6
*
```

Logmode Table Examples

The Logmode table and the configuration of the host application subsystem determine the operational characteristics of a session. The following is an example of the Logmode table for the NCP/VTAM configuration examples. Remember, you must use the operands and values that are in **bold**.

```
HPMODTAB MODTAB
*
* The following entry is an example for SNA NRJE for JES2.
*
MODENRJE MODEENT LOGMODE =MODENRJE,
                FMPROF=X'03',
                TSPROF=X'03',
                PRIPROT=X'B3',
                SECPROT=X'A3',
                COMPROT=X'7080',
                RUSIZES=X'8686',
                PSNDPAC=3,
                SRCVPAC=3,
                SSNDPAC=3,
                PSERVIC=X'01102000F100C00000010040'
*
* The following three entries are examples for SNA IMF.
*
IMF1920 MODEENT LOGMODE =IMF1920,
                FMPROF=X'03',
                TSPROF=X'03',
                PRIPROT=X'B1',
                SECPROT=X'B0',
                COMPROT=X'3080',
                RUSIZES=X'8585',
                PSNDPAC=3,
                SRCVPAC=3,
                SSNDPAC=3,
                PSERVIC=X'020000000000000000000200'
*
IMFLU1 MODEENT LOGMODE =IMFLU1,
                FMPROF=X'03',
                TSPROF=X'03',
                PRIPROT=X'B1',
                SECPROT=X'B0',
```

```
                COMPROT=X'3080',
                RUSIZES=X'8587',
                PSNDPAC=3,
                SRCVPAC=3,
                SSNDPAC=3,
                PSERVIC=X'01000000E100000000000000'
*
IMFLU3 MODEENT LOGMODE =IMFLU3,
                FMPROF=X'03',
                TSPROF=X'03',
                PRIPROT=X'B1',
                SECPROT=X'B0',
                COMPROT=X'3080',
                RUSIZES=X'8587',
                PSNDPAC=3,
                SRCVPAC=3,
                SSNDPAC=3,
                PSERVIC=X'030000000000000000000200'
*
* The following four entries are examples for the IBM 3270
* display stations used by SNA DHCF/iX.
*
DHCF1920 MODEENT LOGMODE =DHCF1920,
                FMPROF=X'03',
                TSPROF=X'03',
                PRIPROT=X'B1',
                SECPROT=X'90',
                COMPROT=X'3080',
                RUSIZES=X'87C7',
                PSERVIC=X'020000000000185000007E00'
*
DHCF2560 MODEENT LOGMODE =DHCF2560,
                FMPROF=X'03',
                TSPROF=X'03',
                PRIPROT=X'B1',
                SECPROT=X'90',
                COMPROT=X'3080',
                RUSIZES=X'87C7',
                PSERVIC=X'020000000000205000007E00'
*
DHCF3440 MODEENT LOGMODE =DHCF3440,
                FMPROF=X'03',
                TSPROF=X'03',
                PRIPROT=X'B1',
                SECPROT=X'B0',
                COMPROT=X'3080',
```

```
                RUSIZES=X'8989',
                PSNDPAC=3,
                SRCVPAC=3,
                SSNDPAC=3,
                PSERVIC=X'0200000000002B5000007E00'
*
BSC1920 MODEENT LOGMODE= BSC1920,
                FMPROF=X'02'
                TSPROF=X'02'
                PRIPROT=X'71'
                SECPROT=X'40'
                COMPROT=X'2000'
                RUSIZE=X'0000'
                PSERVIC=X'000000000000185000007E00'
*
* The following table is an example for LU 6.2 API or HP SNADS/iX.
*
MODE62 MODEENT LOGMODE =MODE62,
                PSNDPAC=3,
                SRCVPAC=0,
                SSNDPAC=0
                PSERVIC=X'000000000000000000000000'
*
```

B

JES Examples

This appendix contains sample JES and POWER configurations for the LU types described in chapter 2.

To ensure that the host configuration is compatible with HP's SNA products, there are values that HP *requires* you set for some operands. These values are in **bold** in this appendix.

If an operand is in bold but the value for it is not, you must include the operand, but you do not have to set it to the value shown. For example, **NUMRDR=**`2`, means you must include the `NUMRDR` operand, but you do not have to set it to `2`. There are also values that HP *suggests* for other operands, which are noted.

Required parameters must be coded as specified. Variable parameters must be set within the constraints defined by HP and the host.

Caution

HP requires that the host be configured as defined in chapter 2 of this manual. Any HP time spent solving problems related to incorrect configuration of the host is billable to the customer on a time and materials basis. The configuration listings must be available to your HP representative in case your installation requires servicing.

Examples begin on the next page.

SNA NRJE Configuration Examples

JES2 Configuration for NRJE

Shown below is an example of a JES2 configuration for two workstations.

```
* ********************************************************************
* HEWLETT PACKARD      REMOTE DEFINITIONS   (JES 1.3.2 OR 1.3.4)    *
* ********************************************************************
*
LOGON1 APPLID=JES2
&MAXSESS=100
&MLBFSIZ=400
&NUMLOGS=1                      NUMBER OF JES2 VTAM INTERFACES
&NUMRJE=30
&NUMLNES=14
&NUMTPBF=100
&TPBFSIZ=400
*
LINE1 HDUPLEX,TRANSP,UNIT=031,HISPEED
LINE2 HDUPLEX,TRANSP,UNIT=033
LINE3 UNIT=SNA,PASSWORD=NRJELN
LINE4 HDUPLEX,TRANSP,UNIT=034
LINE5 HDUPLEX,TRANSP,UNIT=035
LINE6 HDUPLEX,TRANSP,UNIT=036
LINE7 HDUPLEX,TRANSP,UNIT=037
LINE8 UNIT=SNA
LINE9 UNIT=SNA
LINE10 UNIT=SNA
LINE11 UNIT=SNA
LINE12 UNIT=SNA
LINE13 UNIT=SNA
LINE14 UNIT=SNA
```

```
*********************************************************************
*      NRJE REMOTE WORKSTATION DEFINITIONS                          *
*********************************************************************
RMT16 LUTYPE1,BUFSIZE=512,COMP,CONSOLE,NOCMPCT,
          DISCINTV=0,NUMPR=4,NUMPU=4,NUMRDR=2
      SETUPHDR,SETUPINF,WAITIME=1
R16.RD1 CLASS=A,START
R16.RD2 CLASS=A,START
R16.PR1 AUTO[1],CCTL,CLASS=A,CKPTLNS=100,CKPTPGS=10,
        START,PRWIDTH=132,UCS=0,SEP
R16.PR2 AUTO,CCTL,CLASS=A,CKPTLNS=100,CKPTPGS=10,
        START,PRWIDTH=132,UCS=0,SEP
R16.PR3 AUTO,CCTL,CLASS=A,CKPTLNS=100,CKPTPGS=10,
        START,PRWIDTH=132,UCS=0,SEP
R16.PR4 AUTO,CCTL,CLASS=A,CKPTLNS=100,CKPTPGS=10,
        START,PRWIDTH=132,UCS=0,SEP
R16.PU1 AUTO,CCTL,CLASS=B,START,LRECL=80
R16.PU2 AUTO,CCTL,CLASS=B,START,LRECL=80
R16.PU3 AUTO,CCTL,CLASS=B,START,LRECL=80
R16.PU4 AUTO,CCTL,CLASS=B,START,LRECL=80
*
RMT17 LUTYPE1,BUFSIZE=512,COMP,CONSOLE,NOCMPCT,
          DISCINTV=0,NUMPR=4,NUMPU=4,NUMRDR=2
      SETUPHDR,SETUPINF,WAITIME=1
R17.RD1 CLASS=A,START
R17.RD2 CLASS=A,START
R17.PR1 AUTO,CCTL,CLASS=A,CKPTLNS=100,CKPTPGS=10,
        START,PRWIDTH=132,UCS=0,SEP
R17.PR2 AUTO,CCTL,CLASS=A,CKPTLNS=100,CKPTPGS=10,
        START,PRWIDTH=132,UCS=0,SEP
R17.PR3 AUTO,CCTL,CLASS=A,CKPTLNS=100,CKPTPGS=10,
        START,PRWIDTH=132,UCS=0,SEP
R17.PR4 AUTO,CCTL,CLASS=A,CKPTLNS=100,CKPTPGS=10,
        START,PRWIDTH=132,UCS=0,SEP
R17.PU1 AUTO,CCTL,CLASS=B,START,LRECL=80
R17.PU2 AUTO,CCTL,CLASS=B,START,LRECL=80
R17.PU3 AUTO,CCTL,CLASS=B,START,LRECL=80
R17.PU4 AUTO,CCTL,CLASS=B,START,LRECL=80
*
```

[1] This parameter is no longer valid as of JES2 1.3.4. The equivalent work selection (WS) criteria to cause automatic selection of data sets with a form other than the one currently mounted on the JES2 printer is WS=(/F).

JES3 Configuration for SNA NRJE

Shown below is an example of a JES3 configuration for two workstations.

```
/*********************************************************************
*                        REMOTE WORKSTATION                          *
*********************************************************************
*
RJPWS,N=NRJE1,
        RD=02,
        PR=4,
        PU=4,
        C=R,
        P=NODE1,
        PL=2,
        AUTO=N
*
CONSOLE,JNAME=NRJE1,
       TYPE=RJP,
       DEST=NONE,
       LL=80,
       LEVEL=10
*
DEVICE,DTYPE=RMTPRINT,
      JNAME=NRJE1PR1
*
DEVICE,DTYPE=RMTPRINT,
      JNAME=NRJE1PR2
*
DEVICE,DTYPE=RMTPRINT,
      JNAME=NRJE1PR3
*
DEVICE,DTYPE=RMTPRINT,
      JNAME=NRJE1PR4
*
DEVICE,DTYPE=RMTPUNCH,
      JNAME=NRJE1PU1
*
DEVICE,DTYPE=RMTPUNCH,
      JNAME=NRJE1PU1
*
DEVICE,DTYPE=RMTPUNCH,
      JNAME=NRJE1PU3
*
DEVICE,DTYPE=RMTPUNCH,
      JNAME=NRJE1PU4
*
RJPWS,N=NRJE2,
```

```
      RD=02,
      PR=4,
      PU=4,
      C=R,
      P=NODE1,
      PL=2,
      AUTO=N
*
CONSOLE,JNAME=NRJE2,
        TYPE=RJP,
        DEST=NONE,
        LL=80,
        LEVEL=10
*
DEVICE,DTYPE=RMTPRINT,
       JNAME=NRJE2PR1
*
DEVICE,DTYPE=RMTPRINT,
       JNAME=NRJE2PR2
*
DEVICE,DTYPE=RMTPRINT,
       JNAME=NRJE2PR3
*
DEVICE,DTYPE=RMTPRINT,
       JNAME=NRJE2PR4
*
DEVICE,DTYPE=RMTPUNCH,
       JNAME=NRJE2PU1
*
DEVICE,DTYPE=RMTPUNCH,
       JNAME=NRJE2PU1
*
DEVICE,DTYPE=RMTPUNCH,
       JNAME=NRJE2PU3
*
DEVICE,DTYPE=RMTPUNCH,
       JNAME=NRJE2PU4
```

POWER Configuration for NRJE

Shown below is an example of a VSE/POWER configuration for two workstations.

```
RMT001    PRMT     REMOTE=001,
                   TYPE=LUT1,
                   CONSOLE=YES,
                   SESSLIM=6,
                   XLATE=NO
*
RMT002    PRMT     REMOTE=002,
                   TYPE=LUT1,
                   CONSOLE=YES,
                   SESSLIM=6,
                   XLATE=NO
```

C

CICS Examples

This appendix contains sample CICS configurations for the LU types described in chapter 3.

To ensure that the host configuration is compatible with HP's SNA products, there are values that HP *requires* you set for some operands. These values are in **bold** in this appendix.

If an operand is in bold but the value for it is not, you must include the operand, but you do not have to set it to the value shown. For example, **TCTUAL=**`80`, means you must include the `TCTUAL` operand, but you do not have to set it to `80`. There are also values that HP *suggests* for other operands, which are noted.

Required parameters must be coded as specified. Variable parameters must be set within the constraints defined by HP and the host.

Caution

HP requires that the host be configured as defined in chapter 3 of this manual. Any HP time spent solving problems related to incorrect configuration of the host is billable to the customer on a time and materials basis.

The configuration listings must be available to your HP representative in case your installation requires servicing.

Examples begin on the next page.

LU.T1 Configuration Example

This sample defines an IBM 3287 SNA Character String (SCS) printer (LU.T1) to CICS.

```
*****************************************************************
*  SAMPLE TCT FOR SCS PRINTER  LU.T1                            *
*****************************************************************
P014     DFHTCT TYPE=TERMINAL, 3287 SCS PRINTER
&
               ACCMETH=VTAM,
&
               BUFFER=256,
&
               ERRATT=NO,
&
               FEATURE=AUDALARM,
&
               FF=YES,
&
               HF=YES,
&
               VF=YES,
&
               NETNAME=LUHP014,
&
               TRMIDNT=P014,
&
               PGESTAT=AUTOPAGE,
&
               RELREQ=(YES,YES),
&
               RUSIZE=256,
&
               TRMMODL=2,
&
               TRMSTAT=RECEIVE,
&
               TRMTYPE=SCSPRT
```

LU.T2 Configuration Example

This sample defines an IBM 3278 model 2 keyboard/display (LU.T2) to CICS.

```
*********************************************************************
*  SAMPLE TCT FOR 3270 KEYBOARD/DISPLAY  (LU.T2)                    *
*********************************************************************
T012     DFHTCT TYPE=TERMINAL, 3278-2 TERMINAL
&
               ACCMETH=VTAM,
&
               BUFFER=1536,
&
               CHNASSY=YES,
&
               FEATURE=(AUDALARM,SELCTPEN),
&
               NETNAME=LUHP012,
&
               TRMIDNT=T012,
&
               RELREQ=(,YES),
&
               RUSIZE=256,
&
               TCTUAL=80,
&
               TIOAL=(1024,4096),   *
&
               TRMMODL=2,
&
               TRMSTAT=TRANSCEIVE,
&
               TRMTYPE=LUTYPE2

* Maximum chain size cannot exceed 3870 when configuring SNA IMF
for data stream mode.
```

LU.T2X Configuration Example

This sample defines an IBM 3278 model 2 keyboard/display with extended features (LU.T2X) to CICS.

```
*****************************************************************
*  SAMPLE TCT FOR EXTENDED FEATURE KEYBOARD/DISPLAY (LU.T2X)      *
*****************************************************************
T013     DFHTCT TYPE=TERMINAL, 3278-2X TERMINAL
&
               ACCMETH=VTAM,
&
               BUFFER=1536,
&
               CHNASSY=YES,
&
               FEATURE=(AUDALARM,EXTDS,HILIGHT,COLOR,SELCTPEN),
&
               NETNAME=LUHP013,
&
               TRMIDNT=T013,
&
               RELREQ=(NO,YES),
&
               RUSIZE=256,
&
               TCTUAL=80,
&
               TIOAL=(1024,4096),
&
               TRMMODL=2,
&
               TRMSTAT=TRANSCEIVE,
&
               TRMTYPE=LUTYPE2
```

LU.T3 Configuration Example

This sample defines an IBM 3287 Data Stream Compatible (DSC) printer (LU.T3) to CICS.

```
************************************************************
*  SAMPLE TCT FOR DSC PRINTER (LU.T3)                      *
************************************************************
P015     DFHTCT TYPE=TERMINAL, 3287 DSC PRINTER
&
               ACCMETH=VTAM,
&
               BUFFER=256,
&
               FEATURE=AUDALARM,
&
               NETNAME=LUHP015,
&
               TRMIDNT=P015,
&
               PGESTAT=AUTOPAGE,
&
               RELREQ=(YES,YES),
&
               RUSIZE=256,
&
               TRMMODL=2,
&
               TRMSTAT=RECEIVE,
&
               TRMTYPE=LUTYPE3
```

LU Type 6.2 Configuration Example

The following sample defines an MPE LU type 6.2 to CICS.

```
************************************************************
*  SAMPLE TCT FOR  LU TYPE 6.2 (HP 3000)                   *
************************************************************
LDSP     DFHTCT TYPE=SYSTEM,
&
               SYSIDNT=LDSP,
&
               NETNAME=DISP1,
&
               TRMTYPE=LUTYPE62,
&
               FEATURE=SINGLE,
&
               ACCMETH=VTAM,
&
               BUFFER=256,
&
               RUSIZE=256,
&
               TRMSTAT=TRANSCEIVE
```

D

IMS Example

This appendix contains a sample IMS configuration for the HP SNA products described in chapter 4.

To ensure that the host configuration is compatible with HP's SNA products, there are values that HP *requires* you set for some parameters. These values are in **bold** in this appendix.

If a parameter is in bold but the value for it is not, you must include the parameter, but you do not have to set it to the value shown. For example, **OUTBUF**= `1536`, means you must include the `OUTBUF` parameter, but you do not have to set it to `1536`.

Required parameters must be coded as specified. Variable parameters must be set within the constraints defined by HP and the host.

Caution

HP requires that the host be configured as defined in chapter 4 of this manual. Any HP time spent solving problems related to incorrect configuration of the host is billable to the customer on a time and materials basis. The configuration listings must be available to your HP representative in case your installation requires servicing.

The following is an example of a definition for an LU.T1, LU.T2, and LU.T3 for HP's SNA products.

```
          TYPE UNITTYPE=SLUTYPE2
T002      TERMINAL NAME=LUHP002,
&
                   MODEL=2,
&
                   FEAT=(PFK,NOCD),
&
                   OUTBUF=1536
           TYPE UNITTYPE=SLUTYPE1
P003       TERMINAL NAME=LUHP003,
                   MODEL=2,
&
                   MSGDEL=NOTERM,
&
                   OUTBUF=1536
&
```

E

DISOSS Examples

This appendix contains sample DISOSS configurations for the HP SNADS/iX product, as described in chapter 5.

To ensure that the host configuration is compatible with HP's SNA products, there are values that HP *requires* you set for some parameters. These values are in **bold** in this appendix.

If a parameter is in bold but the value for it is not, you must include the parameter, but you do not have to set it to the value shown. For example, **SA**=HANOVER, means you must include the SA parameter, but you do not have to set it to HANOVER.

Required parameters must be coded as specified. Variable parameters must be set within the constraints defined by HP and the host.

Caution

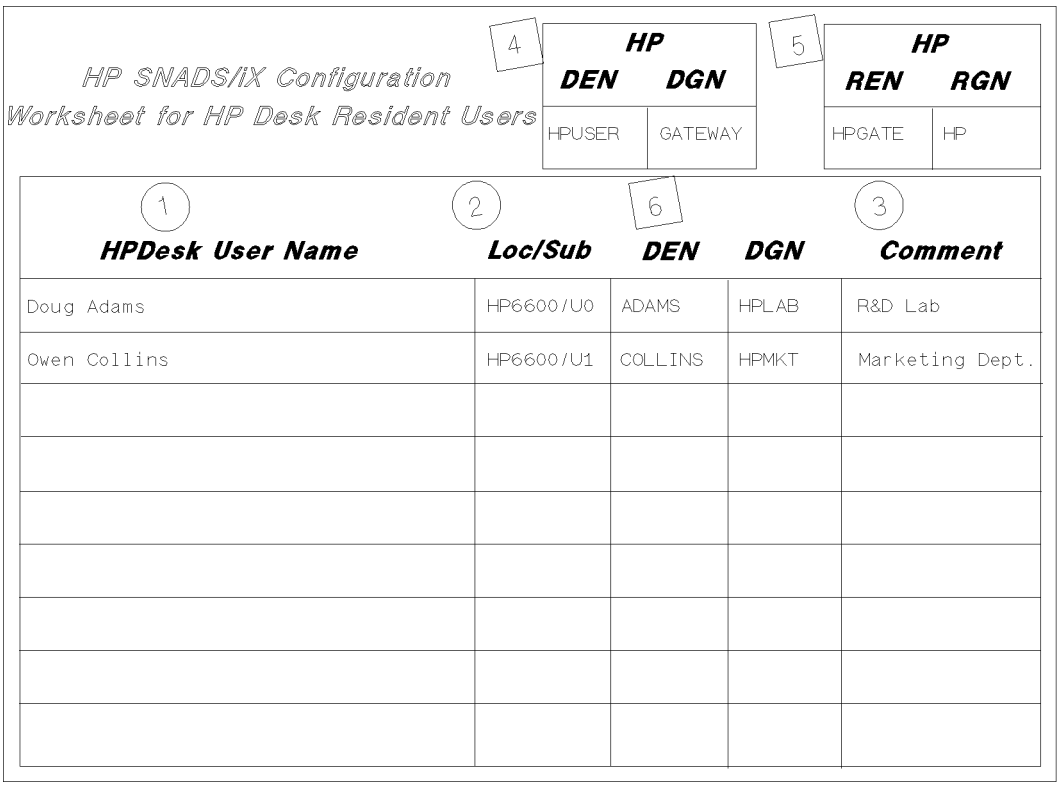
HP requires that the host be configured as defined in chapter 5 of this manual. Any HP time spent solving problems related to incorrect configuration of the host is billable to the customer on a time and materials basis. The configuration listings must be available to your HP representative in case your installation requires servicing.

Examples begin on the next page.

Configuration of HP Desk Resident Users

Figure E-1 shows an example of the HP SNADS/iX configuration worksheet for HP Desk resident users.

The fields correspond to the numbers on the worksheet. Fields 1, 2, and 3 should be completed by the HP SNADS/iX gateway administrator. Fields 4, 5, and 6 should be completed by the IBM system programmer.



HP SNADS/iX Configuration
Worksheet for HP Desk Resident Users

4 HP DEN	HP DGN
HPUSER	GATEWAY

5 HP REN	HP RGN
HPGATE	HP

1 HPDesk User Name	2 Loc/Sub	6 DEN	DGN	3 Comment
Doug Adams	HP6600/U0	ADAMS	HPLAB	R&D Lab
Owen Collins	HP6600/U1	COLLINS	HPMKT	Marketing Dept.

Figure E-1. Example SNADS Config. Worksheet for Desk Users

To connect to HP SNADS/iX, one routing table entry needs to be defined. An REN.RGN should be chosen to represent the HP SNADS/iX gateway. For example, if this REN.RGN is HPGATE.HP, the following entry should be added.

```
ADD RGN=HP,
    REN=HPGATE,
    SSL=*,
    QUEUE=LDSP,
    TRANSID=DSVE
```

The REN.RGN, HPGATE.HP, will need to be configured on the HP SNADS/iX gateway once the product is installed.

In addition, an entry for every HP Desk user needs to be defined in the directory (HUP). For example, a user whose DGN.DEN is ADAMS.HPLAB will need the following directory definition:

```
ADD USERTYPE=REMOTE,
    DDN=HPLAB,
    SA=ADAMS,
    RGN=HPGATE,
    REN=HP
```

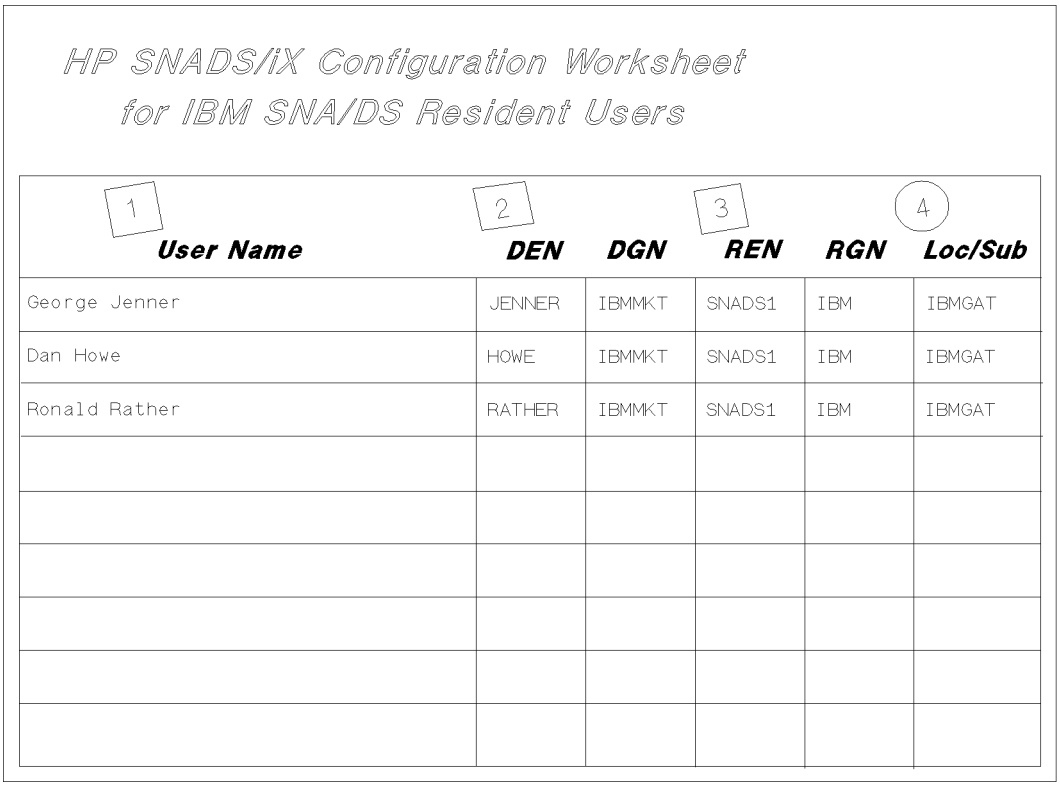
Note

Asterisks (*) are recommended here for the DDN and SA to aid in configuring the HP Desk users.

Configuration of SNA/DS Resident Users

Figure E-2 shows an example of the HP SNADS/iX configuration worksheet for IBM SNA/DS resident users.

The fields correspond to the numbers on the worksheet. Fields 1, 2, and 3 should be completed by the IBM system programmer. Field 4 should be completed by the HP SNADS/iX gateway administrator.



HP SNADS/iX Configuration Worksheet
for IBM SNA/DS Resident Users

1 User Name	2 DEN	DGN	3 REN	4 RGN	Loc/Sub
George Jenner	JENNER	IBMMKT	SNADS1	IBM	IBMGAT
Dan Howe	HOWE	IBMMKT	SNADS1	IBM	IBMGAT
Ronald Rather	RATHER	IBMMKT	SNADS1	IBM	IBMGAT

Figure E-2. Example SNADS Config. Worksheet for IBM Users

F

AS/400 Examples

This appendix contains AS/400 configurations for the networking products described in chapter 6.

To ensure that the AS/400 configuration is compatible with HP's SNA products, there are values that HP *requires* you set for some parameters. These values are in **bold** in this appendix.

If an operand is in bold but the value for it is not, you must include the operand, but you do not have to set it to the value shown. Required parameters must be coded as specified. Variable parameters must be set within the constraints defined by HP and the AS/400.

Caution

HP requires that the host be configured as defined in chapter 6 of this manual. Any HP time spent solving problems related to incorrect configuration of the host is billable to the customer on a time and materials basis.

The configuration listings must be available to your HP representative in case your installation requires servicing.

Examples begin on the next page.

SNA IMF/iX Configuration Example

This section contains a tested AS/400 configuration for communicating with SNA IMF over a leased line. SNA IMF communication over a switched line has also been tested and verified. This AS/400 configuration can be used to communicate with either SNA IMF/iX or SNA IMF/V. Figure F-1 illustrates the configuration described in this section.

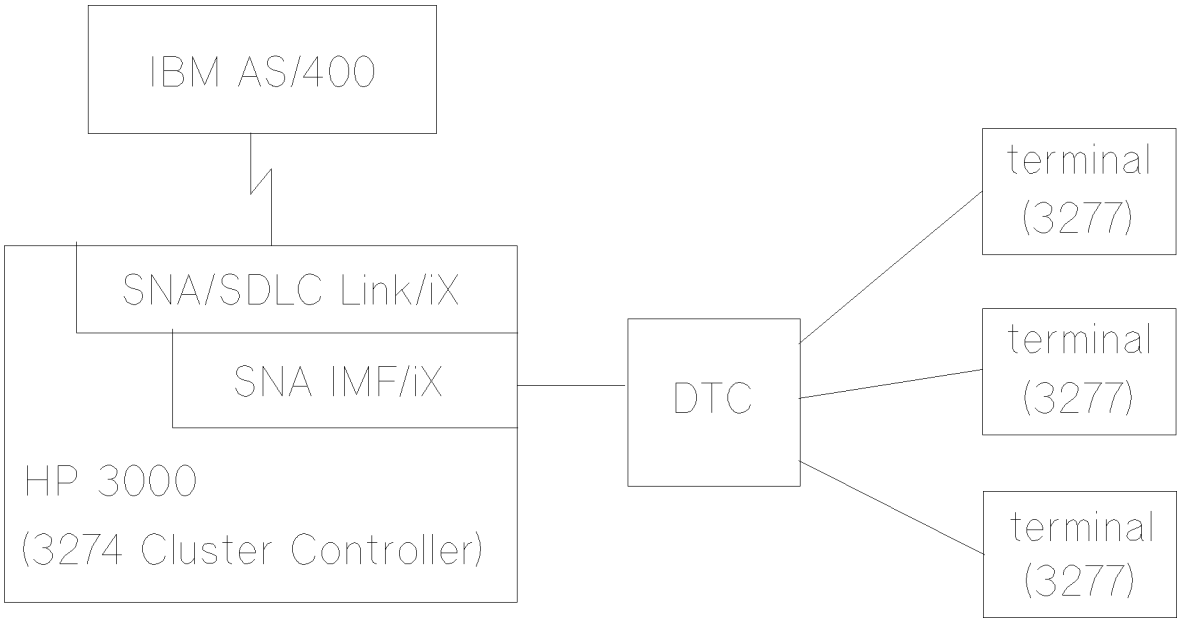


Figure F-1. SNA IMF/iX Example Network

```
Display Line Description - SDLC

Line description . . . . . :   LIND            HP3270L02
Resource name. . . . . . . . :   RSRCNAME       LIN012
Online at IPL. . . . . . . . :   ONLINE        *NO
Data link role . . . . . . . :   ROLE          *PRI
Physical interface . . . . . :   INTERFACE     *RS232V24
Connection type. . . . . . . :   CNN           *NONSWTPP
Switched network backup. . . . . :   SNBU        *NO
Activate swt network backup. . . . :   ACTSNBU
SHM node type. . . . . . . . . :   SHMNODE
Vary on wait . . . . . . . . . :   VRYWAIT
Autocall unit. . . . . . . . . :   AUTOCALL
Attached nonswitched ctl . . . . . :   CTL           HP3274C02
Exchange identifier. . . . . . . :   EXCHID        05600000
NRZI data encoding . . . . . . . :   NRZI          *NO
Maximum controllers. . . . . . . :   MAXCTL        1
Clocking . . . . . . . . . . . . :   CLOCK         *MODEM
Line speed . . . . . . . . . . . :   LINESPEED     9600
Modem type supported . . . . . . :   MODEM         *NORMAL
Modem data rate select . . . . . :   MODEMRATE     *FULL
```

```
  Maximum frame size . . . . . :   MAXFRAME      521
  Error threshold level. . . . . :   THRESHOLD      *OFF
  Duplex . . . . . :   DUPLEX         *FULL
  Modulus. . . . . :   MODULUS        8
  Maximum outstanding frames . . . . . :   MAXOUT         7
  Inactivity timer . . . . . :   INACTTMR
  Poll response delay. . . . . :   POLLRSPDLY
  Nonproductive receive timer. . . . . :   NPRDRCVTMR     320
  Idle timer . . . . . :   IDLTMR         30
  Connect poll timer . . . . . :   CNNPOLLTMR     10
  Poll cycle pause . . . . . :   POLLPAUSE      0
  Frame retry. . . . . :   FRAMERTY       7
  Link speed . . . . . :   LINKSPEED      9600
  Cost/connect time. . . . . :   COSTCNN        0
  Cost/byte. . . . . :   COSTBYTE       0
  Security for line. . . . . :   SECURITY       *NONSECURE
  Propagation delay. . . . . :   PRPDLY         *TELEPHONE
  User-defined 1 . . . . . :   USRDFN1        128
  User-defined 2 . . . . . :   USRDFN2        128
  User-defined 3 . . . . . :   USRDFN3        128

  Recovery limits. . . . . :   CMNRCYLMT
    Count limit. . . . . :                     2
    Time interval. . . . . :                   5
  Text . . . . . :   TEXT           SDLC Line 2

Display Controller Description - Remote WS

  Controller description . . . . . :   CTLD           HP3274C02
  Controller type. . . . . :   TYPE           3274
  Controller model . . . . . :   MODEL          0
  Link type. . . . . :   LINKTYPE       *SDLC
  Online at IPL. . . . . :   ONLINE         *NO
  Switched line. . . . . :   SWITCHED       *NO
  Short hold mode. . . . . :   SHM
  Switched Network backup. . . . . :   SNBU           *NO
  Activate swt network backup. . . . . :   ACTSNBU
  Attached nonswitched line. . . . . :   LINE           HP3270L02
  Switched line list . . . . . :   SWTLINST

  Attached devices . . . . . :   DEV
    HP3277_02B     HP3277_03B     HP3277_04B

  Character code . . . . . :   CODE           *EBCDIC
  Device wait timer. . . . . :   DEVWAITTMR     120
  Maximum frame size . . . . . :   MAXFRAME
  Exchange identifier. . . . . :   EXCHID         01700001
  SSCP identifier. . . . . :   SSCPID         050000000000
```

```
   Initial connection . . . . . :   INLCNN
   Connection number. . . . . :   CNNNBR
   Predial delay. . . . . :   PREDIALDLY
   Redial delay . . . . . :   REDIALDLY
   Dial retry . . . . . :   DIALRTY
   Remote autoanswer. . . . . :   RMTAUTOANS
   SHM disconnect limit . . . . . :   SHMDSCLMT
   SHM disconnect timer . . . . . :   SHMDSCTMR

   Station address. . . . . :   STNADR          C1
   SDLC poll priority . . . . . :   POLLPTY          *NO
   SDLC poll limit. . . . . :   POLLLMT          0
   SDLC connect poll retry. . . . . :   CNNPOLLRTY       *NOMAX
   SDLC NRM poll timer. . . . . :   NRMPOLLTMR       0
   SDLC NDM poll timer. . . . . :   NDMPOLLTMR       *CALC
   Recovery limits. . . . . :   CMNRCYLMT
     Count limit. . . . . :                     99
     Time interval. . . . . :                     5
   Text . . . . . :   TEXT          HP3270 cluster
                                                  controller
```

Display Device Description - Display

```
   Device description . . . . . :   DEVD            HP3277_02B
   Device class . . . . . :   DEVCLS          *RMT
   Device type. . . . . :   TYPE            3277
   Device model . . . . . :   MODEL          0
   Port number. . . . . :   PORT
   Switch setting . . . . . :   SWTSET
   Local location address . . . . . :   LOCADR          02
   Online at IPL. . . . . :   ONLINE          *NO
   Attached controller. . . . . :   CTL             HP3274C02
   Keyboard language type . . . . . :   KBDTYPE
   Drop line at signoff . . . . . :   DROP            *NO
   Character identifier . . . . . :   CHRID
   Allow blinking cursor. . . . . :   ALWBLN
   Auxiliary devices. . . . . :   AUXDEV

   Printer. . . . . :   PRINTER
   Print file . . . . . :   PRTFILE          QSYSPRT
     Library. . . . . :                       *LIBL
   Maximum length of request unit . . . :   MAXLENRU         *CALC
   Text . . . . . :   HP3277_02B remote display
```

Display Device Description - Display

```
   Device description . . . . . :   DEVD            HP3277_03B
   Device class . . . . . :   DEVCLS          *RMT
   Device type. . . . . :   TYPE            3277
```

```
  Device model . . . . . :   MODEL           0
  Port number. . . . . :   PORT
  Switch setting . . . . . :   SWTSET
  Local location address . . . . . :   LOCADR          03
  Online at IPL. . . . . :   ONLINE          *NO
  Attached controller. . . . . :   CTL             HP3274C02
  Keyboard language type . . . . . :   KBDTYPE
  Drop line at signoff . . . . . :   DROP            *NO
  Character identifier . . . . . :   CHRID
  Allow blinking cursor. . . . . :   ALWBLN
  Auxiliary devices. . . . . :   AUXDEV

  Printer. . . . . :   PRINTER
  Print file . . . . . :   PRTFILE         QSYSPRT
    Library. . . . . :                       *LIBL
  Maximum length of request unit . . . :   MAXLENRU        *CALC
  Text . . . . . :   HP3277_03B remote display
```

Display Device Description - Display

```
  Device description . . . . . :   DEVD            HP3277_04B
  Device class . . . . . :   DEVCLS          *RMT
  Device type. . . . . :   TYPE            3277
  Device model . . . . . :   MODEL           0
  Port number. . . . . :   PORT
  Switch setting . . . . . :   SWTSET
  Local location address . . . . . :   LOCADR          04
  Online at IPL. . . . . :   ONLINE          *NO
  Attached controller. . . . . :   CTL             HP3274C02
  Keyboard language type . . . . . :   KBDTYPE
  Drop line at signoff . . . . . :   DROP            *NO
  Character identifier . . . . . :   CHRID
  Allow blinking cursor. . . . . :   ALWBLN
  Auxiliary devices. . . . . :   AUXDEV

  Printer. . . . . :   PRINTER
  Print file . . . . . :   PRTFILE         QSYSPRT
    Library. . . . . :                       *LIBL
  Maximum length of request unit . . . :   MAXLENRU        *CALC
  Text . . . . . :   HP3277_04B remote display
```

SNA IMF/iX over X.25 Configuration Example

This section contains a tested AS/400 configuration for communicating with SNA IMF/iX over an X.25 network. Figure F-2 illustrates the configuration described in this section.

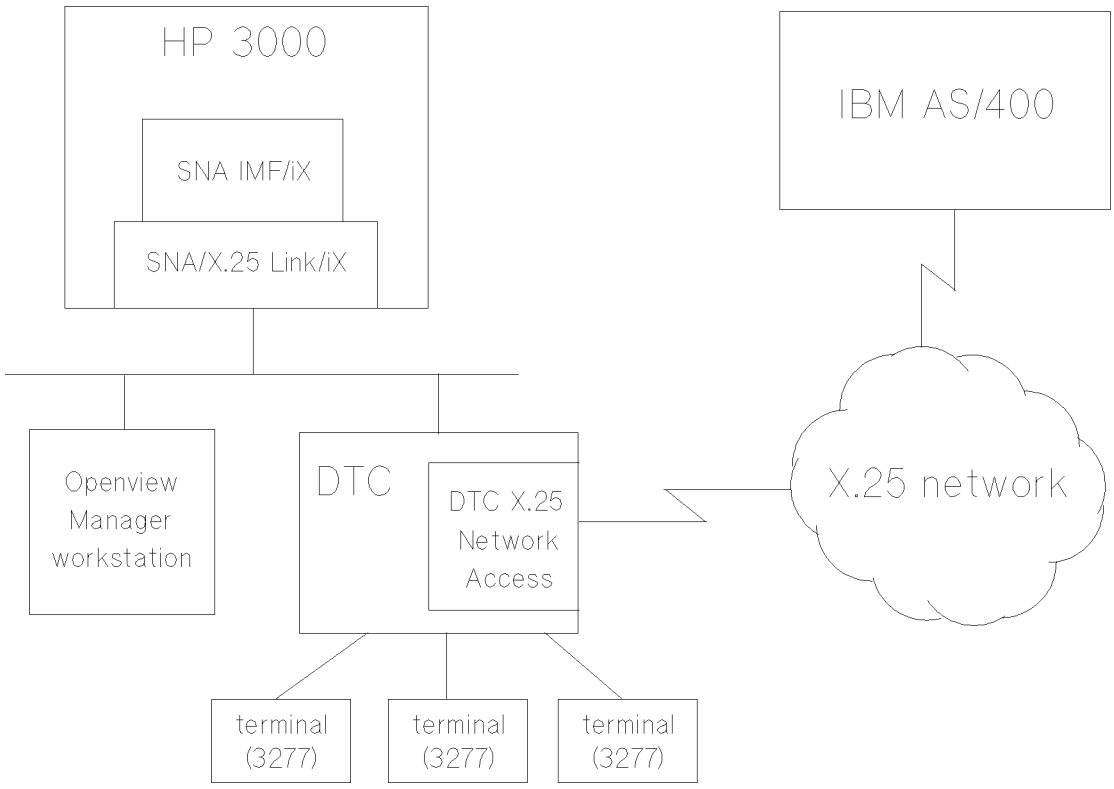


Figure F-2. SNA IMF/iX over X.25 Example Network

```
Display Line Description - X.25

Line description . . . . . .:   LIND            X25L01
Resource name. . . . . .:   RSRCNAME        LIN011
Logical channel entries. . . . . .:   LGLCHLE

  Logical Channel        Logical Channel          Active SVC or
    Identifier               Type          Attached PVC Controller
       004                 *SVCIN
       005                 *SVCIN
       006                 *SVCBOTH
       007                 *SVCBOTH
       008                 *SVCBOTH

Local network address . . . . . :   NETADDR         399969876545
Connection initiation . . . . . :   CNNINIT         *REMOTE
Online at IPL . . . . . :   ONLINE          *YES
Physical interface . . . . . .:   INTERFACE       *X21BISV24
```

```
   Vary on wait . . . . . :   VRYWAIT          *NOWAIT
   Line speed . . . . . :   LINESPEED        9600
   Exchange identifier. . . . . :   EXCHID           05600000
   Default packet size. . . . . :   DFTPKTSIZE       128
   Maximum packet size. . . . . :   MAXPKTSIZE       128
   Modulus. . . . . :   MODULUS          8
   Default window size. . . . . :   DFTWDWSIZE       2
   Switched controller list . . . . . :   SWTCTLLIST       *NONE

   Idle timer . . . . . :   IDLTMR           30
   Frame retry. . . . . :   FRAMERTY         7
   Insert net address in packets. . . . :   ADRINSERT       *NO
   X.25 DCE support . . . . . :   X25DCE           *NO
   Error threshold level. . . . . :   THRESHOLD       *OFF
   Link speed . . . . . :   LINKSPEED       9600
   Cost/connect time. . . . . :   COSTCNN          128
   Cost/byte. . . . . :   COSTBYTE         128
   Security for line. . . . . :   SECURITY        *PKTSWTNET
   Propagation delay. . . . . :   PRPDLY          *PKTSWTNET
   User-defined 1 . . . . . :   USRDFN1         128
   User-defined 2 . . . . . :   USRDFN2         128
   User-defined 3 . . . . . :   USRDFN3         128

   Recovery limits. . . . . :   CMNRCYLMT
     Count limit. . . . . :                      2
     Time interval. . . . . :                    0
   Text . . . . . :   TEXT            *BLANK
```

Display Controller Description - Remote WS

```
   Controller description . . . . . :   CTLD            X25SVC
   Controller type. . . . . :   TYPE            3274
   Controller model . . . . . :   MODEL           0
   Link type. . . . . :   LINKTYPE        *X25
   Online at IPL. . . . . :   ONLINE          *YES
   Switched line. . . . . :   SWITCHED        *YES
   Short hold mode. . . . . :   SHM
   Switched Network backup. . . . . :   SNBU
   Activate swt network backup. . . . . :   ACTSNBU
   Attached nonswitched line. . . . . :   LINE
   Switched line list . . . . . :   SWTLINLST       X25L01
   Attached devices . . . . . :   DEV
     X25LU2       X25LU3       X25LU4

   Character code . . . . . :   CODE            *EBCDIC
   Device wait timer. . . . . :   DEVWAITTMR      120
   Maximum frame size . . . . . :   MAXFRAME
   Exchange identifier. . . . . :   EXCHID          017ABCDE
```

```
   SSCP identifier. . . . . .:   SSCPID          050000000000
   Initial connection . . . . .:   INLCNN          *ANS
   Connection number. . . . . .:   CNNNBR          399969876545
   Predial delay. . . . . .:   PREDIALDLY
   Redial delay . . . . . .:   REDIALDLY
   Dial retry . . . . . .:   DIALRTY
   Remote autoanswer. . . . . .:   RMTAUTOANS
   SHM disconnect limit . . . . . .:   SHMDSCLMT
   SHM disconnect timer . . . . . .:   SHMDSCTMR
   X.25 network level . . . . . .:   NETLVL          1984
   X.25 link level protocol . . . . . .:   LINKPCL          *QLLC
   X.25 logical channel ID. . . . . .:   LGLCHLID
   X.25 connection password . . . . . .:   CNNPWD
   X.25 default packet size . . . . . .:   DFTPKTSIZE       *LIND
     Negotiated packet size . . . . . .:
   X.25 default window size . . . . . .:   DFTWDWSIZE       *LIND
     Negotiated window size . . . . . .:
   X.25 user group identifier . . . . .:   USRGRPID
   X.25 reverse charging. . . . . .:   RVSCRG          *NONE
   X.25 frame retry . . . . . .:   X25FRMRTY        7
   X.25 connect retry . . . . . .:   X25CNNRTY        7
   X.25 response timer. . . . . .:   X25RSPTMR        100
   X.25 connection timer. . . . . .:   X25CNNTMR        100
   X.25 delayed connection timer. . . .:   X25DLYTMR
   X.25 acknowledgement timer . . . . .:   X25ACKTMR
   X.25 inactivity timer. . . . . .:   X25INACTMR

   User facilities. . . . . .:   USRFCL

   Recovery limits. . . . . .:   CMNRCYLMT
     Count limit. . . . . .:                     2
     Time interval. . . . . .:                     0
   Text . . . . . .:   TEXT            *BLANK
```

Display Device Description - Display

```
   Device description . . . . . .:   DEVD            X25LU2
   Device class . . . . . .:   DEVCLS          *RMT
   Device type. . . . . .:   TYPE            3277
   Device model . . . . . .:   MODEL           0
   Port number. . . . . .:   PORT
   Switch setting . . . . . .:   SWTSET
   Local location address . . . . . .:   LOCADR          02
   Online at IPL. . . . . .:   ONLINE          *YES
   Attached controller. . . . . .:   CTL             X25SVC
   Keyboard language type . . . . . .:   KBDTYPE
   Drop line at signoff . . . . . .:   DROP            *YES
   Character identifier . . . . . .:   CHRID
```

```
   Allow blinking cursor. . . . . :   ALWBLN
   Auxiliary devices. . . . . :   AUXDEV
   Printer. . . . . :   PRINTER
   Print file . . . . . :   PRTFILE          QSYSPRT
     Library. . . . . :                       *LIBL
   Maximum length of request unit . . . :   MAXLENRU        *CALC
   Text . . . . . :   TEXT             *BLANK
```

Display Device Description - Display

```
   Device description . . . . . :   DEVD             X25LU3
   Device class . . . . . :   DEVCLS           *RMT
   Device type. . . . . :   TYPE             3277
   Device model . . . . . :   MODEL            0
   Port number. . . . . :   PORT
   Switch setting . . . . . :   SWTSET
   Local location address . . . . . :   LOCADR           03
   Online at IPL. . . . . :   ONLINE           *YES
   Attached controller. . . . . :   CTL              X25SVC
   Keyboard language type . . . . . :   KBDTYPE
   Drop line at signoff . . . . . :   DROP             *YES
   Character identifier . . . . . :   CHRID
   Allow blinking cursor. . . . . :   ALWBLN
   Auxiliary devices. . . . . :   AUXDEV
   Printer. . . . . :   PRINTER
   Print file . . . . . :   PRTFILE          QSYSPRT
     Library. . . . . :                       *LIBL
   Maximum length of request unit . . . :   MAXLENRU        *CALC
   Text . . . . . :   TEXT             *BLANK
```

Display Device Description - Display

```
   Device description . . . . . :   DEVD             X25LU4
   Device class . . . . . :   DEVCLS           *RMT
   Device type. . . . . :   TYPE             3277
   Device model . . . . . :   MODEL            0
   Port number. . . . . :   PORT
   Switch setting . . . . . :   SWTSET
   Local location address . . . . . :   LOCADR           04
   Online at IPL. . . . . :   ONLINE           *YES
   Attached controller. . . . . :   CTL              X25SVC
   Keyboard language type . . . . . :   KBDTYPE
   Drop line at signoff . . . . . :   DROP             *YES
   Character identifier . . . . . :   CHRID
   Allow blinking cursor. . . . . :   ALWBLN
   Auxiliary devices. . . . . :   AUXDEV
   Printer. . . . . :   PRINTER
   Print file . . . . . :   PRTFILE          QSYSPRT
     Library. . . . . :                       *LIBL
```

```
Maximum length of request unit . . .:   MAXLENRU          *CALC
Text . . . . . . . . . . . . . . . . .:   TEXT            *BLANK
```

HP SNADS/iX Configuration Example

This section contains a tested configuration for an AS/400 that acts as a Network Node and performs routing services for an HP 3000 configured as a LEN node. The AS/400 and the HP 3000 use HP SNADS/iX to communicate over an APPN network. Figure F-3 illustrates the configuration described in this section.

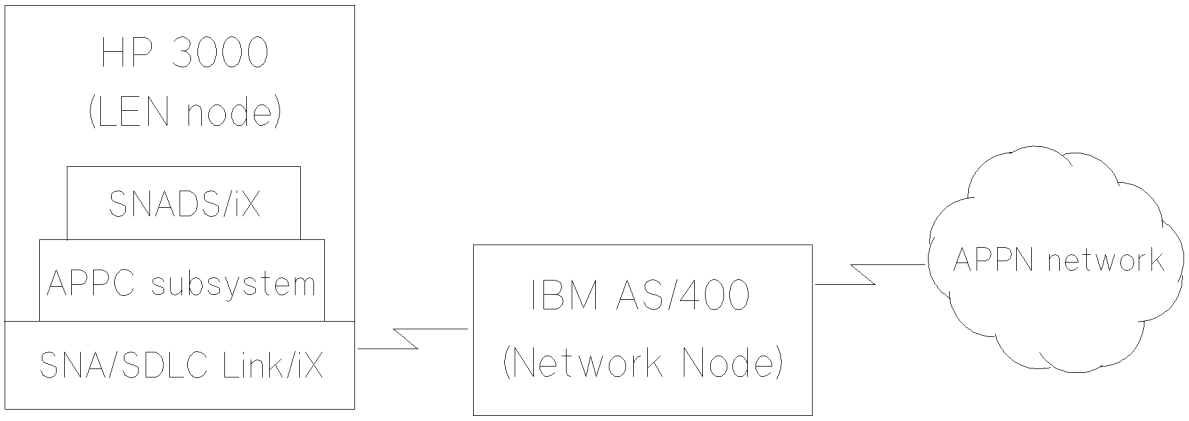


Figure F-3. SNADS/iX Example Network

```
Display Details of Distribution Queue

   Queue. . . . . . . . . . . . . . . . . . . . . . . :   HPDESKQ
   Queue type. . . . . . . . . . . . . . . . . . . . . :   *SNADS
   Remote location name . . . . . . . . . . . . . . . :   APPC002
   Mode. . . . . . . . . . . . . . . . . . . . . . . . :   DW
   Remote net ID. . . . . . . . . . . . . . . . . . . :   APPN
   Local location name. . . . . . . . . . . . . . . . :   AS40002
   Normal priority:
      Send time:
         From/To . . . . . . . . . . . . . . . . . . . :   :   :
         Force . . . . . . . . . . . . . . . . . . . . :   :
      Send depth . . . . . . . . . . . . . . . . . . . :   1
   High priority:
      Send time:
         From/To . . . . . . . . . . . . . . . . . . . :   :   :
         Force . . . . . . . . . . . . . . . . . . . . :   :
      Send depth . . . . . . . . . . . . . . . . . . . :   1
   Number of retries . . . . . . . . . . . . . . . . . :   3
   Number of minutes
      between retries. . . . . . . . . . . . . . . . . :   5
   To ignore time/depth values
      while receiving:
      Send queue . . . . . . . . . . . . . . . . . . . :   N

Display Details of Routing Table Entry

   Destination system
```

```
      name/group. . . . . :   HPGATE   HP
   Description . . . . . :   HP Desk system
   Service level:
      Fast:
         Queue name. . . . . :   HPDESKQ
         Maximum hops . . . . . :   *DFT
      Status:
         Queue name . . . . . :   HPDESKQ
         Maximum hops. . . . . :   *DFT
      Data high:
         Queue name . . . . . :   HPDESKQ
         Maximum hops. . . . . :   *DFT
      Data low:
         Queue name . . . . . :   HPDESKQ
         Maximum hops. . . . . :   *DFT
```

Display Directory Entry Details (remote HP Desk user)

```
   User ID/Address . . . . . :   *ANY   HPLAB
   Description . . . . . :   Users on HP Desk
   System name/Group . . . . . :   HPGATE   HP
   User profile. . . . . :
   Indirect user . . . . . :   No
   Personal mail . . . . . :   No
   Mailing Address . . . . . :
   Location. . . . . :
   Telephone numbers . . . . . :
   Text. . . . . :
```

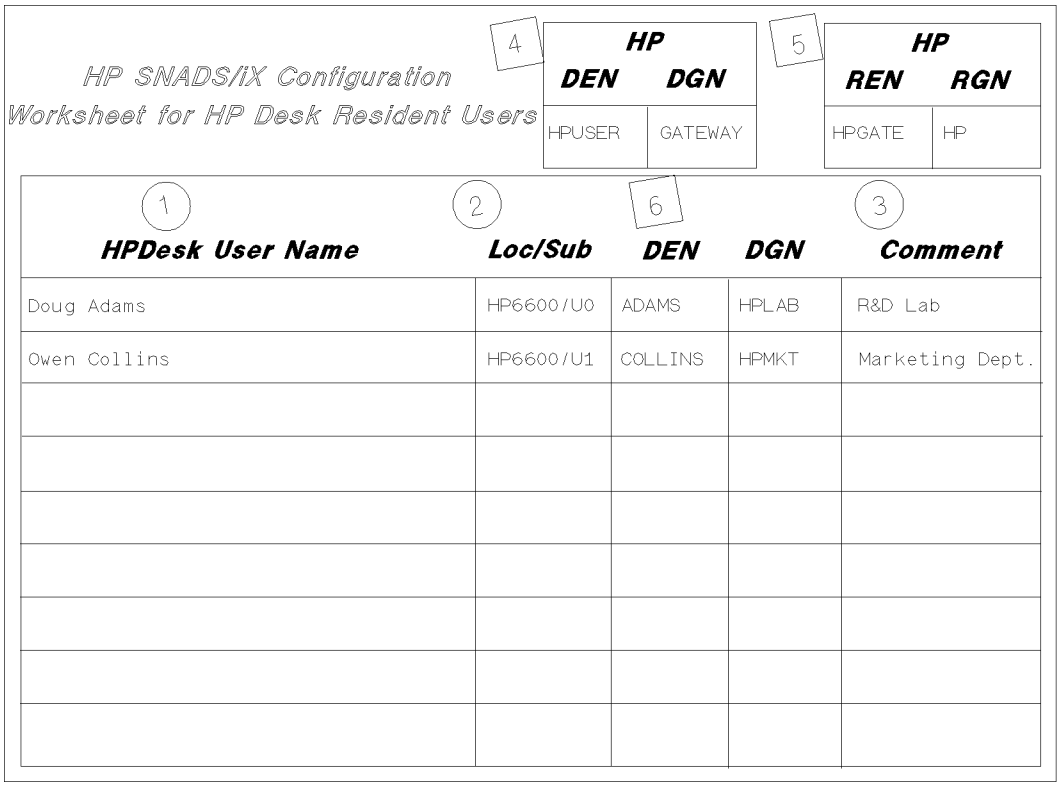
Display Directory Entry Details (local AS/400 user)

```
   User ID/Address . . . . . :   JENNER   IBMMKT
   Description . . . . . :   IBM mail user
   System name/Group . . . . . :   SNADS1   IBM
   User profile. . . . . :
   Indirect user . . . . . :   No
   Personal mail . . . . . :   No
   Mailing Address . . . . . :
   Location. . . . . :
   Telephone numbers . . . . . :
   Text. . . . . :
```

Configuration of HP Desk Resident Users

Figure F-4 shows an example of the HP SNADS/iX configuration worksheet for HP Desk resident users.

The fields correspond to the numbers on the worksheet. Fields 1, 2, and 3 should be completed by the HP SNADS/iX gateway administrator. Fields 4, 5, and 6 should be completed by the AS/400 system administrator.



HP SNADS/iX Configuration
Worksheet for HP Desk Resident Users

4 HP DEN	HP DGN
HPUSER	GATEWAY

5 HP REN	HP RGN
HPGATE	HP

1 HPDesk User Name	2 Loc/Sub	6 DEN	DGN	3 Comment
Doug Adams	HP6600/U0	ADAMS	HPLAB	R&D Lab
Owen Collins	HP6600/U1	COLLINS	HPMKT	Marketing Dept.

Figure F-4. Example SNADS Config. Worksheet for Desk Users

Configuration of SNA/DS Resident Users

Figure F-5 shows an example of the HP SNADS/iX configuration worksheet for IBM SNA/DS resident users.

The fields correspond to the numbers on the worksheet. Fields 1, 2, and 3 should be completed by the AS/400 system administrator. Field 4 should be completed by the HP SNADS/iX gateway administrator.

HP SNADS/iX Configuration Worksheet
for IBM SNA/DS Resident Users

1 User Name	2 DEN	DGN	3 REN	4 RGN	Loc/Sub
George Jenner	JENNER	IBMMKT	SNADS1	IBM	IBMGAT
Dan Howe	HOWE	IBMMKT	SNADS1	IBM	IBMGAT
Ronald Rather	RATHER	IBMMKT	SNADS1	IBM	IBMGAT

Figure F-5. Example SNADS Config. Worksheet for IBM Users

LU 6.2 API/iX Configuration Example

This section contains a tested configuration for an AS/400 that acts as a Network Node and performs routing services for an HP 3000 configured as a LEN node. The AS/400 and the HP 3000 use LU 6.2 API/iX to communicate over an APPN network. Figure F-6 illustrates the configuration described in this section.

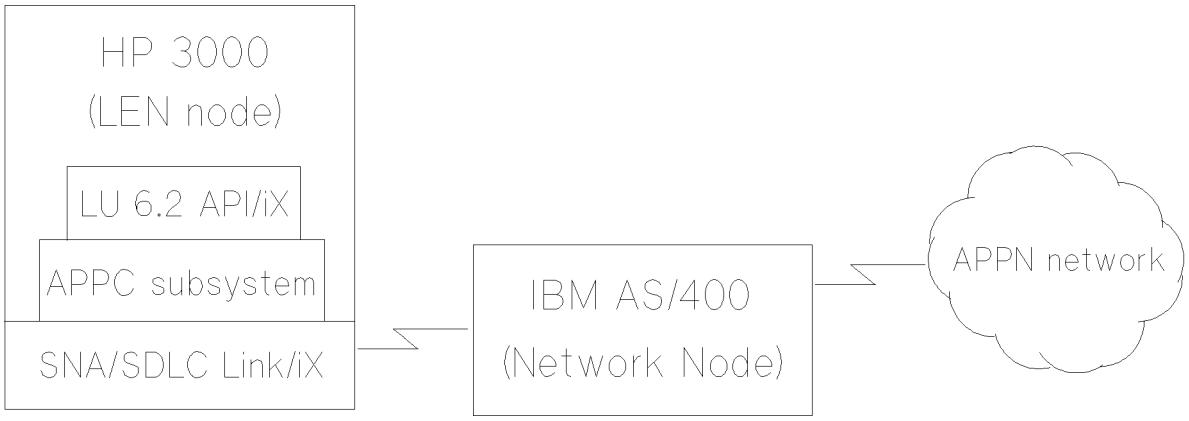


Figure F-6. LU 6.2 API/iX Example Network

```
Display Network Attributes

  Current system name. . . . . . . . . . . . . . . :   ASLAN
    Pending system name. . . . . . . . . . . . . . :
  Local network ID . . . . . . . . . . . . . . . . :   APPN
  Local control point name . . . . . . . . . . . . :   ASLAN
  Default local location . . . . . . . . . . . . . :   ASLAN
  Default mode . . . . . . . . . . . . . . . . . . :   BLANK
  Maximum number of conversations for a remote
    location. . . . . . . . . . . . . . . . . . . . :   512
  APPN node type . . . . . . . . . . . . . . . . . :   *NETNODE
  Maximum number of intermediate sessions. . . . . :   200
  Route addition resistance. . . . . . . . . . . . :   128
  Server network ID/control point name . . . . . . :   *LCLNETID    *ANY
  Alert status . . . . . . . . . . . . . . . . . . :   *OFF
  Alert primary focal point. . . . . . . . . . . . :   *NO
  Alert default focal point. . . . . . . . . . . . :   *NO
  Alert logging status . . . . . . . . . . . . . . :   *NONE
  Alert controller description . . . . . . . . . . :   *NONE
  Message queue. . . . . . . . . . . . . . . . . . :   QSYSOPR
    Library. . . . . . . . . . . . . . . . . . . . :     QSYS
  Output queue . . . . . . . . . . . . . . . . . . :   QPRINT
    Library. . . . . . . . . . . . . . . . . . . . :     QGPL
  Job action . . . . . . . . . . . . . . . . . . . :   *FILE
  Maximum hop count. . . . . . . . . . . . . . . . :   16
  DDM request access . . . . . . . . . . . . . . . :   *OBJAUT
  PC Support request access. . . . . . . . . . . . :   *OBJAUT
```

Display Mode Description

Mode description name. . . . . :	MODD	DW
Class-of-service . . . . . :	COS	#CONNECT
Maximum number of sessions . . . . . :	MAXSSN	255
Maximum conversations. . . . . :	MAXCNV	256
Locally controlled sessions. . . . . :	**LCLCTLSSN**	0
Pre-established sessions . . . . . :	PREESTSSN	0
Inbound pacing value . . . . . :	**INPACING**	7
Outbound pacing value. . . . . :	**OUTPACING**	7
Max length of request unit . . . . . :	**MAXLENRU**	256
Text . . . . . :	TEXT	'LU6.2 mode description

Define APPN Remote Locations page 1

Remote Location Name	Remote Network ID	Local Location Name	Control Point Name	Control Point Net ID	Location Password	Secure Loc
APPC001	APPN	AS40001	HPAPPC	APPN		*NO
APPC002	APPN	AS40002	HPAPPC	APPN		*NO
APPC003	APPN	AS40003	HPAPPC	APPN		*NO

Define APPN Remote Locations page 2

Remote Location Name	Remote Network ID	Local Location Name	Single Session	Local Control	Preest Ssn	Entry Description
APPC001	APPN	AS40001	*YES	*NO	*NO	
APPC002	APPN	AS40002	*NO	*NO	*NO	
APPC003	APPN	AS40003	*NO	*NO	*NO	

Define APPN Local Locations

Local Location Name	Entry Description	Local Location Name	Entry Description
AS40001			
AS40002			
AS40003			

Display Line Description - SDLC

Line description . . . . . :	LIND	HP21L02
Resource names . . . . . :	RSRCNAME	LIN012
Online at IPL. . . . . :	ONLINE	*NO
Data link role . . . . . :	**ROLE**	***PRI**
Physical interface . . . . . :	INTERFACE	*RS232V24
Connection type. . . . . :	CNN	*NONSWTPP
Switched network backup. . . . . :	SNBU	*NO
Activate swt network backup. . . . :	ACTSNBU	
SHM node type. . . . . :	SHMNODE	
Vary on wait . . . . . :	VRYWAIT	

```
   Autocall unit. . . . . :   AUTOCALL
   Attached nonswitched ctl . . . . . :   CTL              HP21C01
   Exchange identifier. . . . . :   EXCHID           05600000
   NRZI data encoding . . . . . :   NRZI             *NO
   Maximum controllers. . . . . :   MAXCTL           1
   Clocking . . . . . :   CLOCK            *MODEM
   Line speed . . . . . :   LINESPEED      9600
   Modem type supported . . . . . :   MODEM            *NORMAL
   Modem data rate select . . . . . :   MODEMRATE       *FULL
   Maximum frame size . . . . . :   MAXFRAME       265
   Duplex . . . . . :   DUPLEX           *FULL
   Inactivity timer . . . . . :   INACTTMR         300
   Poll response delay. . . . . :   POLLRSPDLY      0
   Nonproductive receive timer. . . . . :   NPRDRCVTMR      320
   Idle timer . . . . . :   IDLTMR           30
   Connect poll timer . . . . . :   CNNPOLLTMR      300
   Poll cycle pause . . . . . :   POLLPAUSE       0
   Frame retry. . . . . :   FRAMERTY         7
   Text . . . . . :   TEXT             APPC Line 2
```

Display Controller Description - APPC

```
   Controller description . . . . . :   CTLD           HP21C01
   Link type. . . . . :   LINKTYPE       *SDLC
   Online at IPL. . . . . :   ONLINE         *YES
   Switched line. . . . . :   SWITCHED       *NO
   Short hold mode. . . . . :   SHM
   Switched network backup. . . . . :   SNBU           *NO
   Activate swt network backup. . . . . :   ACTSNBU
   APPN-capable . . . . . :   APPN           *YES
   Attached nonswitched line. . . . . :   LINE           HP21L02
   Switched line list . . . . . :   SWTLINLST

   Attached devices . . . . . :   DEV
     HP21D01    HP21D02

   Character code . . . . . :   CODE           *EBCDIC
   Maximum frame size . . . . . :   MAXFRAME       265
   Remote network identifier. . . . . :   RMTNETID      *NETATTR
   Remote control point name. . . . . :   RMTCPNAME     HPAPPC
   Exchange identifier. . . . . :   EXCHID         05600000
   Initial connection . . . . . :   INLCNN
   Connection number. . . . . :   CNNNBR
   Predial delay. . . . . :   PREDIALDLY
   Redial delay . . . . . :   REDIALDLY
   Dial retry . . . . . :   DIALRTY
   Remote autoanswer. . . . . :   RMTAUTOANS
   Switched disconnect. . . . . :   SWTDSC
```

```
  Disconnect timer . . . . . :   DSCTMR
  Data link role . . . . . :   ROLE          *SEC
  SHM disconnect limit . . . . . :   SHMDSCLMT
  SHM disconnect timer . . . . . :   SHMDSCTMR
  Station address. . . . . :   STNADR        C1
  SDLC poll priority . . . . . :   POLLPTY        *NO
  SDLC poll limit. . . . . :   POLLLMT        0
  SDLC connect poll retry. . . . . :   CNNPOLLRTY     *NOMAX
  SDLC NRM poll timer. . . . . :   NRMPOLLTMR     3
  SDLC NDM poll timer. . . . . :   NDMPOLLTMR     *CALC
  APPN CP session support. . . . . :   CPSSN          *NO
  APPN node type . . . . . :   NODETYPE     *LENNODE
  APPN transmission grp number . . . . :   TMSGRPNBR      1

  Recovery limits. . . . . :   CMNRCYLMT
    Count limit. . . . . :                    2
    Time interval. . . . . :                    5
  Text . . . . . :   TEXT    HP3000 LEN node
                             description
```

Display Device Description - APPC

```
 Device description . . . . . :   DEVD            HP21D01
 Remote location name . . . . . :   RMTLOCNAME   APPC001
 Online at IPL. . . . . :   ONLINE          *YES
 Attached controller. . . . . :   CTL             HP21C01
 Local location name. . . . . :   LCLLOCNAME    AS40001
 Remote network identifier. . . . . :   RMTNETID        *NETATR
 Mode . . . . . :   MODE          DW

 Message queue. . . . . :   MSGQ            QSYSOPR
   Library. . . . . :                       *LIBL
 APPN-capable . . . . . :   APPN            *YES
 Single session . . . . . :   SNGSSN         *YES
 Locally controlled session . . . . . :   LCLCTLSSN     *NO
 Pre-established session. . . . . :   PREESTSSN
 Secure location. . . . . :   SECURELOC      *NO
 Local location address . . . . . :   LOCADR          00
 Text . . . . . :   TEXT            Single-session device
```

Display Device Description - APPC

```
 Device description . . . . . :   DEVD            HP21D02
 Remote location name . . . . . :   RMTLOCNAME   APPC002
 Online at IPL. . . . . :   ONLINE          *YES
 Attached controller. . . . . :   CTL             HP21C01
 Local location name. . . . . :   LCLLOCNAME    AS40002
 Remote network identifier. . . . . :   RMTNETID        APPN
```

```
Mode . . . . . :   MODE          DW

Message queue. . . . . :   MSGQ          QSYSOPR
  Library. . . . . :                       *LIBL
APPN-capable . . . . . :   APPN          *YES
Single session . . . . . :   SNGSSN      *NO
Locally controlled session . . . . . :   LCLCTLSSN
Pre-established session. . . . . :   PREESTSSN
Secure location. . . . . :   SECURELOC    *NO
Local location address . . . . . :   LOCADR       00
Text . . . . . :   TEXT        Parallel-session device
```

SNA/Token Ring/iX Configuration Example

This section contains a tested AS/400 configuration for communicating with an HP 3000 over a token ring network. Figure F-7 illustrates the configuration described in this section.

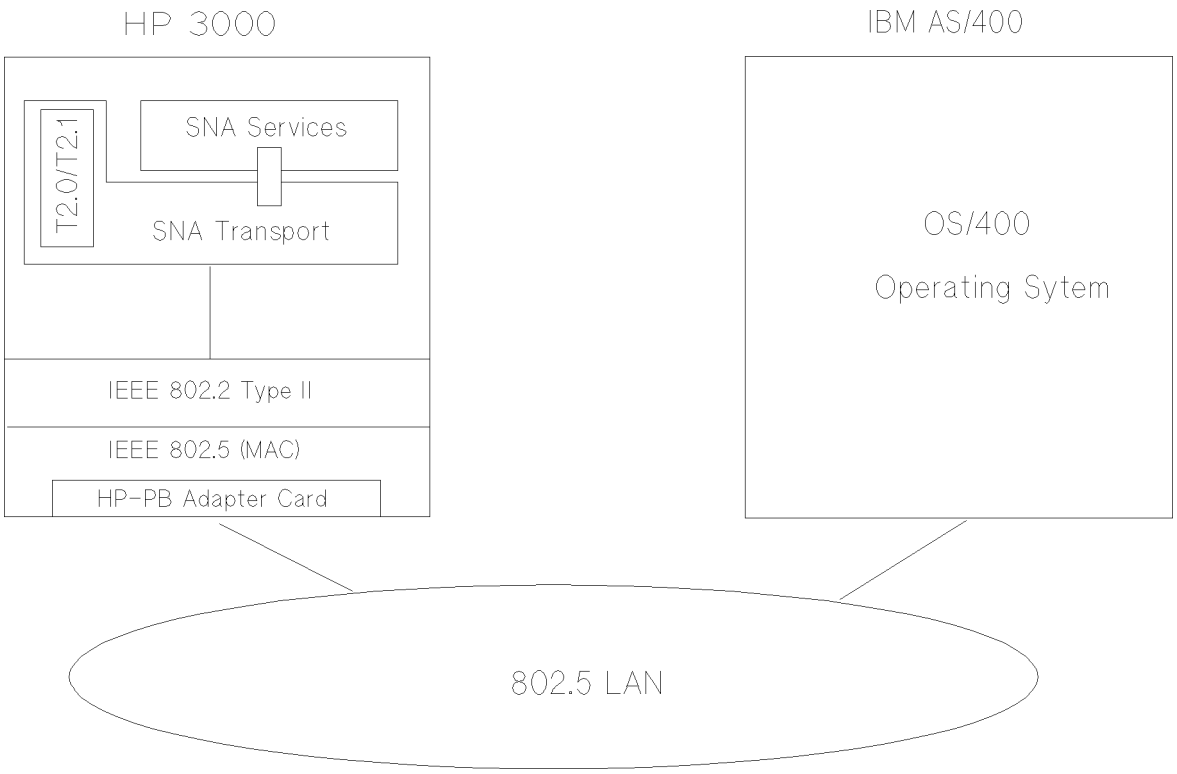


Figure F-7. SNA/Token Ring/iX Example Network

```
Display Line Description - Token Ring

  Line description . . . . . .:   LIND            TRLINE
  Resource name. . . . . . . .:   RSRCNAME        LIN012
  Online at IPL. . . . . . . .:   ONLINE          *YES
  Vary on wait . . . . . . . .:   VRYWAIT.........*NOWAIT
  Network Controller . . . . . :  NETCTL
  Maximum controllers. . . . . .:  MAXCTL         10
  Maximum frame size . . . . . .:  MAXFRAME       1994
  TRLAN Manager logging level. . . . .:  TRNLOGLVL  *MAX
    Current logging level. . . . . .:               *MAX
  Local adapter address. . . . . .:  ADPTADR      10005A040EED
  Exchange identifier. . . . . . .:  EXCHID       05631408
  Source service access points . . . .:  SSAP
    04  06  AA  08  0C  10  14  18  1C

  Error threshold level. . . . . .:  THRESHOLD    *OFF
  Link speed . . . . . . . . . . .:  LINKSPEED    4M
  Cost/connect time. . . . . . . .:  COSTCNN      0
```

```
  Cost/byte. . . . . .:   COSTBYTE         0
  Security for line. . . . . .:   SECURITY         *NONSECURE
  Propagation delay. . . . . .:   PRPDLY           *LAN
  User-defined 1 . . . . . .:   USRDFN1          128
  User-defined 2 . . . . . .:   USRDFN2          128
  User-defined 3 . . . . . .:   USRDFN3          128

  Recovery limits. . . . . .:   CMNRCYLMT
    Count limit. . . . . .:                      2
    Time interval. . . . . .:                    5
  Text . . . . . .:   TEXT             Token Ring
                                       Network
```

Display Controller Description - APPC

```
  Controller description . . . . . .:   CTLD             CTLIRMA
  Controller type. . . . . .:   TYPE             3174
  Controller model . . . . . .:   MODEL            0
  Link type. . . . . .:   LINKTYPE         *TRLAN
  Online at IPL. . . . . .:   ONLINE           *YES
  Switched line. . . . . .:   SWITCHED
  Short hold mode. . . . . .:   SHM
  Switched Network backup. . . . . .:   SNBU
  Activate swt network backup. . . . .:   ACTSNBU
  Attached nonswitched line. . . . . .:   LINE
  Switched line list . . . . . .:   SWTLINST
    TRNLINE
  Attached devices . . . . . .:   DEV
    HPLU01     HPLU02

  Character code . . . . . .:   CODE             *EBCDIC
  Device wait timer. . . . . .:   DEVWAITTMR       120
  Maximum frame size . . . . . .:   MAXFRAME         1994
  Exchange identifier. . . . . .:   EXCHID
  Remote control point name. . . . . .:   RMTCPNAME     IXCP
  SSCP identifier. . . . . .:   SSCPID          050000000000
  Initial connection . . . . . .:   INLCNN          *DIAL
  Connection number. . . . . .:   CNNNBR
  Predial delay. . . . . .:   PREDIALDLY
  Redial delay . . . . . .:   REDIALDLY
  Dial retry . . . . . .:   DIALRTY
  Remote autoanswer. . . . . .:   RMTAUTOANS
  SHM disconnect limit . . . . . .:   SHMDSCLMT
  SHM disconnect timer . . . . . .:   SHMDSCTMR

  TRNLAN remote adapter address. . . .:   ADPTADR        10005A0011AB
  TRLAN DSAP . . . . . .:   DSAP           04
  TRLAN SSAP . . . . . .:   SSAP           0C
```

```
   TRLAN frame retry. . . . . .:   TRNFRMRTY        10
   TRLAN connect retry. . . . . .:   TRNCNNRTY        10
   TRLAN response timer . . . . . .:   TRNRSPTMR        10
   TRLAN connection timer . . . . . .:   TRNCNNTMR        70
   TRLAN acknowledgement timer. . . . .:   TRNACKTMR        1
   TRLAN inactivity timer . . . . . .:   TRNINACTMR       100
   TRLAN ack frequency. . . . . .:   TRNACKFRQ        1
   TRLAN max outstanding frames . . . .:   TRNMAXOUT        2
   TRLAN access priority. . . . . .:   TRNACCPTY        0
   Recovery limits. . . . . .:   CMNRCYLMT
     Count limit. . . . . .:                       *SYSVAL
     Time interval. . . . . .:
   Text . . . . . .:   TEXT           3270 connection
                                           to irma
```

Display Device Description - Display

```
   Device description . . . . . .:   DEVD             HPLU01
   Device class . . . . . .:   DEVCLS           *RMT
   Device type. . . . . .:   TYPE             3277
   Device model . . . . . .:   MODEL            0
   Port number. . . . . .:   PORT
   Switch setting . . . . . .:   SWTSET
   Local location address . . . . . .:   LOCADR           02
   Online at IPL. . . . . .:   ONLINE           *YES
   Attached controller. . . . . .:   CTL              CTLIRM
   Keyboard language type . . . . . .:   KBDTYPE
   Drop line at signoff . . . . . .:   DROP             *YES
   Character identifier . . . . . .:   CHRID
   Allow blinking cursor. . . . . .:   ALWBLN
   Auxiliary devices. . . . . .:   AUXDEV

   Printer. . . . . .:   PRINTER
   Print file . . . . . .:   PRTFILE          QSYSPRT
     Library. . . . . .:                       *LIBL
   Maximum length of request unit . . .:   MAXLENRU         *CALC
   Text . . . . . .:   TEXT
```

Display Device Description - Display

```
   Device description . . . . . .:   DEVD             HPLU02
   Device class . . . . . .:   DEVCLS           *RMT
   Device type. . . . . .:   TYPE             3277
   Device model . . . . . .:   MODEL            0
   Port number. . . . . .:   PORT
   Switch setting . . . . . .:   SWTSET
   Local location address . . . . . .:   LOCADR           01
   Online at IPL. . . . . .:   ONLINE           *YES
   Attached controller. . . . . .:   CTL              CTLIRMA
   Keyboard language type . . . . . .:   KBDTYPE
   Drop line at signoff . . . . . .:   DROP             *YES
```

```
Character identifier . . . . . :   CHRID
Allow blinking cursor. . . . . :   ALWBLN
Auxiliary devices. . . . . :   AUXDEV

Printer. . . . . :   PRINTER
Print file . . . . . :   PRTFILE          QSYSPRT
  Library. . . . . :                       *LIBL
Maximum length of request unit . . .:   MAXLENRU        *CALC
Text . . . . . :   TEXT
```

Index

D

M

N

O

P

Q

R

S

T

U

V

W

X