S544-3977-04

InfoPrint 60
3130, 3160 and 3935
Advanced Function Printer

# Attachment Configuration Handbook

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3130, 3160 and 3935
Advanced Function Printer

# Attachment Configuration Handbook

**Note**

Before using this information and the product it supports, be sure to read the general information in Chapter 1, “Read This Chapter First” on page 1.

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This edition obsoletes S544-3977-03.



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# What′s New in This Publication

The following machine types and model types of InfoPrint 60 and the 3160 are covered in this publication.

| Machine Number | Machine Type | Model Number |
|---|---|---|
| 3160 | 3160 | Model 001 |
| InfoPrint 60 | 3160 | Model 002 |

# Chapter 1. Read This Chapter First

## Purpose of This Book

This book helps you collect the information you need to provide to the customer engineer before the customer engineer installs your 3130, InfoPrint 60, 3160, or 3935 Page Printer. This book also contains samples and tips that you can use to help set up your host environment.

## Audience

This book is for the system programming and networking personnel responsible for making sure the host system environment is ready for the printer and printer attachment you will use. This book is not for novices; it assumes you are already familiar with the systems and network programs your site uses (for example, PSF, VTAM, JES, Communications Manager, and so on).

## Attachment Configuration -- Overview

Installing a printer attachment is a two-phase process:

- First, you must prepare your host and network processing environments. The complexity of this phase depends on the host system you run and the attachment you use. Configuring a twinaxial attachment for an AS/400 is relatively straightforward. Configuring a remote 3745 token-ring attachment for MVS probably requires advance planning and coordination with your network administrators and system programmers.
- Second, the customer engineer installs your printer and the attachment you use to connect to your host system. Please note that the customer engineer will **not** be able to make your printer print correctly unless you have properly set up your host environment and completed the appropriate configuration worksheet contained in this book.

**Important!**

Because there are so many network variations possible, this document can be considered only a high-level guide. The information in this book covers many installations, but advanced planning is still a critical part of a successful installation.

Also, note that the information in this book applies to the 3130, InfoPrint 60, 3160, and the 3935 Page Printers. This book contains many examples that use 3935 in names and descriptions (for example, LU3935, PRT3935, PU3935, IBM3935). Please keep in mind that these are only sample names and you can and should change them to something that is consistent with the naming conventions at your site.

## 3130 Attachment Support

Table 1 summarizes the host environments that support the 3130 and the attachments each host supports.

*Table 1. 3130 Attachment Support*

| Operating System | Required PSF Program[3] | Attachment Support | | | | | |
|---|---|---|---|---|---|---|---|
| | | SDLC (SNA) | Token Ring (SNA) | Token Ring (TCP/IP) | Ethernet (TCP/IP) | Twinaxial | PC Parallel |
| MVS | PSF/MVS | Yes | Yes | Yes | Yes | No | No |
| VM | PSF/VM | Yes | Yes | No | No | No | No |
| VSE | PSF/VSE | Yes | Yes[1] | No | No | No | No |
| AS/400 | PSF/400[4] | Yes | Yes | Yes[2] | Yes[2] | Yes | No |
| AIX | PSF/6000 | No | No | Yes | Yes | No | Yes |
| OS/2 | PSF/2 | Yes | Yes | Yes | Yes | No | Yes |

**Notes:**

1. VSE token ring support is **not** provided for ES/9370 and 9371 processors.
2. Token ring TCP/IP and Ethernet TCP/IP support for the AS/400 require AFCCU microcode level 2.35 or greater.
3. The latest available level of service for PSF/MVS, PSF/400, PSF/VSE, PSF/2, PSF/VM, and PSF/6000 must be installed on the host system.
4. In OS/400 Version 3 Release 0.5 and earlier, PSF/400 is part of the OS/400 Operating System. In Release 3.1 and above, PSF/400 is a feature of the OS/400 Operating System. Releases prior to Version 3 Release 1 require you to run the printer in 3935 emulation mode; however, you can still configure the printer for 240-pel resolution.

- For more information about host software requirements, refer to *Advanced Function Presentation: Printer Information*, G544-3290 or to the Introduction and Planning Guide for your printer.

## InfoPrint 60 and 3160 Attachment Support

Table 2 summarizes the host environments that support the 3160-001 and the attachments each host supports.

*Table 2. 3160-001 Attachment Support*

| Operating System | Required PSF Program[3] | Attachment Support | | | | | |
|---|---|---|---|---|---|---|---|
| | | SDLC (SNA) | Token Ring (SNA) | Token Ring (TCP/IP) | Ethernet (TCP/IP) | Twinaxial | Parallel Channel |
| MVS | PSF/MVS | No | Yes | Yes | Yes | No | Yes |
| VM | PSF/VM | No | Yes | No | No | No | Yes |
| VSE | PSF/VSE | No | Yes[1] | No | No | No | Yes[2] |
| AS/400 | PSF/400[4] | No | Yes | Yes | Yes | No | No |
| AIX | PSF/6000 | No | No | Yes | Yes | No | No |
| OS/2 | PSF/2 | No | Yes | Yes | Yes | No | No |

**Notes:**

1. VSE token ring support is **not** provided for ES/9370 and 9371 processors.
2. VSE Parallel Channel support is not provided for 308X, ES/9370, and 9371 processors.
3. The latest available level of service for PSF/MVS, PSF/400, PSF/VSE, PSF/2, PSF/VM, and PSF/6000 must be installed on the host system.
4. In OS/400 Version 3 Release 0.5 and earlier, PSF/400 is part of the OS/400 Operating System. In Release 3.1 and above, PSF/400 is a feature of the OS/400 Operating System. Releases prior to Version 3 Release 1 require you to run the printer in 3935 emulation mode; however, you can still configure the printer for 240-pel resolution.

- For more information about host software requirements, refer to *Advanced Function Presentation: Printer Information*, G544-3290 or to the Introduction and Planning Guide for your printer.

Table 3 on page 4 summarizes the host environments that support the InfoPrint 60 and the attachments each host supports.

*Table 3. InfoPrint 60 Attachment Support*

| Operating System | Required PSF Program | Attachment Support | | | | | |
|---|---|---|---|---|---|---|---|
| | | SDLC (SNA) | Token Ring (SNA) | Token Ring (TCP/IP) | Ethernet (TCP/IP) | Twinaxial | Parallel Channel |
| MVS | PSF/MVS[1] | No | No | Yes | Yes | No | No |
| VM | PSF/VM | No | No | No | No | No | No |
| VSE | PSF/VSE | No | No | No | No | No | No |
| AS/400 | PSF/400[1,2] | No | No | Yes | Yes | No | No |
| AIX | PSF/6000[1] | No | No | Yes | Yes | No | No |
| OS/2 | PSF/2[1] | No | No | Yes | Yes | No | No |

**Notes:**

1. The latest available level of service for PSF/MVS, PSF/400, PSF/2, and PSF/6000 must be installed on the host system.

- For more information about host software requirements, refer to *Advanced Function Presentation: Printer Information*, G544-3290 or to the Introduction and Planning Guide for your printer.

## 3935 Attachment Support

Table 4 summarizes the host environments that support the 3935 and the attachments each host supports.

*Table 4. 3935 Attachment Support*

| Operating System | Required PSF Program[5] | Attachment Support | | | | | |
|---|---|---|---|---|---|---|---|
| | | SDLC (SNA) | Token Ring (SNA) | Token Ring (TCP/IP) | Ethernet (TCP/IP) | Twinaxial | Parallel Channel |
| MVS | PSF/MVS | Yes | Yes | No | No | No | Yes[1] |
| VM | PSF/VM | Yes | Yes | No | No | No | No |
| VSE | PSF/VSE | Yes | Yes[2] | No | No | No | Yes[3] |
| AS/400 | PSF/400[6] | Yes | Yes | Yes[4] | Yes[4] | Yes | No |
| AIX | PSF/6000 | No | No | Yes | Yes | No | Yes |
| OS/2 | PSF/2 | Yes | Yes | Yes | Yes | No | No |

**Notes:**

1. MVS Parallel Channel support is not provided for 308X processors.
2. VSE token ring support is **not** provided for ES/9370 and 9371 processors.
3. VSE Parallel Channel support is not provided for 308X, ES/9370, and 9371 processors.
4. Token ring TCP/IP and Ethernet TCP/IP support for the AS/400 require AFCCU microcode level 3.11 or greater.
5. The latest available level of service for PSF/MVS, PSF/400, PSF/VSE, PSF/2, PSF/VM, and PSF/6000 must be installed on the host system.
6. In OS/400 Version 3 Release 0.5 and earlier, PSF/400 is part of the OS/400 Operating System. In Release 3.1 and above, PSF/400 is a feature of the OS/400 Operating System.

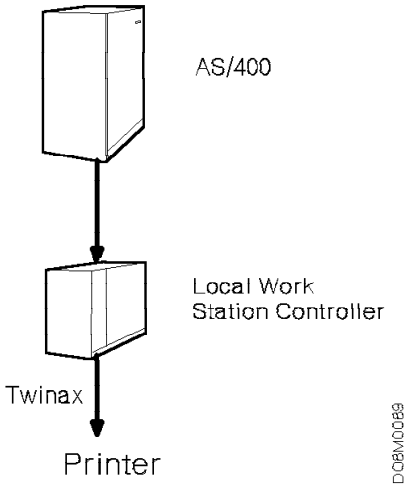
- For more information about host software requirements, refer to *Advanced Function Presentation: Printer Information*, G544-3290 or to the Introduction and Planning Guide for your printer.

## Configuration Steps

**Important** If you are configuring a 3130 Release 2 for IPDS, refer to “Configuring for IPDS” on page 341.

# AS/400 Attachments

# Chapter 2. AS/400 Twinaxial Attachment




*AS/400 Twinaxial Attachment*

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and twinaxial attachment:

- Complete the attachment worksheet for your printer.
- Create the controller description. See “Controller Description (CRTCTLLWS)” on page 14.
- Create the printer device description. See “Printer Device Description (CRTDEVPRT)” on page 15.

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

For more information about requirements, refer to:

- Chapter 1, “Read This Chapter First” on page 1
- *Advanced Function Presentation: Printer Information*, G544-3290
- The Introduction and Planning Guide for your printer

## Twinaxial Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the twinaxial attachment parameters in the leftmost column.

→ The lower part of the worksheet lists AS/400 configuration parameters that do not correspond to twinaxial attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the AS/400 environment is set up properly for the twinaxial attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

## Attachment Worksheet (Not for 3130 Release 2)

*Table 5. AS/400 Twinaxial Attachment Configuration Worksheet*

| Printer Attachment Parameters | AS/400 Parameters | | Acceptable Values | Value to Use |
|---|---|---|---|---|
| | Controller Description (see topic 14) | Printer Device Description (see topic 15) | | |
| Twinaxial link A installed | | | Yes or No | **Yes** |
| Station address | | SWTSET | 0 to 6 | |

**Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters.

| | CTLD | CTL | |
|---|---|---|---|
| | | AFP | ***YES** |
| | | AFPATTACH | ***WSC** |
| | | FORMFEED | ***AUTOCUT** |

*Table 6. AS/400 Twinaxial Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | AS/400 Parameters | | Acceptable Values | Value to Use |
|---|---|---|---|---|
| | Controller Description (see topic 14) | Printer Device Description (see topic 15) | | |
| **Note:** The menu tree for the following parameters is Attachments -> Twinaxial -> Configuration | | | | |
| Station address | | SWTSET | 0 to 6 | |
| Auto Start | | | Yes or No | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | |
| Source Attachment | | | | **Twinaxial** |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | |
| | CTLD | CTL | | |
| | | AFP | | ***YES** |
| | | AFPATTACH | | ***WSC** |
| | | FORMFEED | | ***AUTOCUT** |
| **Note:** Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9. | | | | |

## Twinaxial Attachment Configuration

Figure 1 shows a sample twinaxial attachment configuration. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. Only the Station Address parameter applies to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" for a description of parameters unique to 3130 Release 2.

```
Twinaxial Attachment A Installed                Yes
Twinaxial Attachment B Installed                No
Station Address                                 1
Card 1 slot position                            1
Card 2 slot position                            Not installed
```

*Figure 1. Sample AS/400 Twinaxial Attachment Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Twinaxial A Install Status** | Specifies whether or not the Twinaxial A attachment is installed. Specify **Yes**. |
| **Twinaxial B Install Status** | Specifies whether or not the Twinaxial B attachment is installed. This value is preset and cannot be changed. |
| **Station Address** | Defines the destination address that the AS/400 uses to send information to the local logical unit. This value must match the Switch Setting (SWTSET) value in the Printer Device description (topic 15). |
| **Card 1 slot position** | Specifies the Micro Channel card slot of the attachment adapter designated as link A. This value is preset and cannot be changed. |
| **Card 2 slot position** | Specifies the Micro Channel card slot of the attachment adapter designated as link B. This value is preset and cannot be changed. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **Twinaxial**. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Enable IPDS** | Specify **ENABLED.**<br><br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |

## Controller Description (CRTCTLLWS)

To create a description for the local work station controller, enter the CRTCTLLWS command from an AS/400 command line. To update an existing description, use the CHGCTLLWS command.

Figure 2 shows a sample controller description for a twinaxial attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
Controller description  . . . . . :  CTLD        CTL01
Option  . . . . . . . . . . . . . :  OPTION      *ALL
Category of controller    . . . . :              *LWS
Controller type . . . . . . . . . :  TYPE        6040
Controller model  . . . . . . . . :  MODEL       1
Resource name . . . . . . . . . . :  RSRCNAME    CTL01
Online at IPL . . . . . . . . . . :  ONLINE      *YES
Auto-configuration controller . . :  ONLINE      *YES
Text  . . . . . . . . . . . . . . :  TEXT        Controller description
Attached devices  . . . . . . . . :  DEV
------------------Attached Devices----------------------------
PRT3935

Device wait timer . . . . . . . . :  DEVWAITTMR  10
```

*Figure 2. Sample Controller Description*

| Field | Notes |
|---|---|
| **Controller Description** | The Attached Controller (CTL) value in the Printer Device description (topic 15) must match the value you specify for Controller Description. |

## Printer Device Description (CRTDEVPRT)

**Important**

If you auto-configure the printer, make sure you specify the Advanced Function Printing (AFP) and Form Feed (FORMFEED) parameters as shown below.

To create the Printer Device description, enter the CRTDEVPRT command from an AS/400 command line. To update an existing description, use the CHGDEVPRT command.

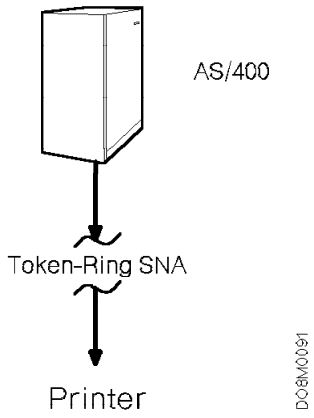
Figure 3 shows a sample Printer Device description for a twinaxial attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
Device description . . . . .   DEVD        PRT3935
Option . . . . . .  . . . . .   OPTION      *ALL
Category of device . . . . .                *PRT
Device class . . . . . .  . .   DEVCLS      *LCL
Device type  . . . . . .  . .   TYPE        *IPDS
Device model . . . . . .  . .   MODEL       0
Advanced function printing .    AFP         *YES
AFP attachment . . . . . .  .   AFPATTACH   *WSC
Port number  . . . . . .  . .   PORT        3
Switch setting . . . . . .  .   SWTSET      1
Online at IPL  . . . . . .  .   ONLINE      *YES
Attached controller  . . . .    CTL         CTL01
Font . . . . . .  . . . . . .   FONT
  Identifier . . . . . .  . .               011
  Point size . . . . . .  . .               *NONE
Form feed  . . . . . .  . . .   FORMFEED    *AUTOCUT
Separator drawer . . . . . .    SEPDRAWER   *FILE
Separator program  . . . . .    SEPPGM      *NONE
  Library  . . . . . .  . . .
Printer error message  . . .    PRTERRMSG   *INQ
Message queue  . . . . . .  .   MSGQ        QSYSOPR
  Library  . . . . . .  . . .                 *LIBL
Maximum pending requests . .    MAXPNDRQS   6
Printing while converting  .    PRTCVT      *YES
Form definition  . . . . . .    FORMDF      F1C1011O
  Library  . . . . . .  . . .                 *LIBL
Text . . . . . .  . . . . . .   TEXT        Printer description
```

*Figure 3. Sample Printer Device Description*

| Field | Notes |
|---|---|
| **Advanced Function Printing** | Specify ***YES**. |
| **AFP Attachment** | Specify ***WSC**. |
| **Switch Setting** | Specifies the switch setting for local twinaxial devices. The Station Address specified in the Twinaxial Attachment description (topic 13) must match the value you specify for Switch Setting. |
| **Attached Controller** | This value must match the Controller Description (CTLD) value in the Controller Description (topic 14). |
| **Form Feed** | Specify ***AUTOCUT**. |

# Chapter 3. AS/400 SNA Token-Ring Attachment




*AS/400 SNA Token-Ring Attachment*

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and token-ring attachment:

- Complete the attachment worksheet for your printer.
- Create the Token-Ring Line description. See "Token-Ring Line Description (CRTLINTRN)" on page 26.
- Create the APPC Controller description. See "APPC Controller Description (CRTCTLAPPC)" on page 28.
- Create the APPC Device description. See "APPC Device Description (CRTDEVAPPC)" on page 30.
- Create the Printer Device description. See "Printer Device Description (CRTDEVPRT)" on page 32.

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

For more information about requirements, refer to:

- Chapter 1, "Read This Chapter First" on page 1
- *Advanced Function Presentation: Printer Information*, G544-3290
- The Introduction and Planning Guide for your printer

## SNA Token-Ring Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the token-ring attachment parameters in the leftmost column. You must complete the **Value to Use** column for all token-ring attachment parameters before the customer engineer can install the token-ring attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- The **Acceptable Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the only column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

→ The lower part of the worksheet lists AS/400 configuration parameters that do not correspond to token-ring attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the AS/400 environment is set up properly for the token-ring attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 7. AS/400 SNA Token-Ring Attachment Configuration Worksheet*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | Token-Ring Line Description (see topic 26) | APPC Controller Description (see topic 28) | APPC Device Description (see topic 30) | Printer Device Description (see topic 32) | | |
| Installed | | | | | Yes or No | **Yes** |
| XID Number | | EXCHID | | | 07100000 to 071FFFFF | **071**_____ |
| Remote Network Name | | | | | Up to 8 characters | |
| SNA Intervention Timer | | | | | 0 to 99 (Minutes) | |
| Local LU Name | | | RMTLOCNAME | RMTLOCNAME | Up to 8 characters | |
| Remote LU Name | | | LCLLOCNAME | LCLLOCNAME | Up to 8 characters | |
| Mode Name | | | MODE | MODE | Up to 8 characters | **QSPWTR** |
| Remote Address | ADPTADR | | | | 400000000000 to 7FFFFFFFFFFF | |
| Local Network Name | | RMTNETID | RMTNETID | RMTNETID | Up to 8 characters | |
| Control Point Name | | RMTCPNAME | | | Up to 8 characters | |
| Alternate Address | | ADPTADR | | | 400000000000 to 7FFFFFFFFFFF | |
| Ring Speed (Mbps) | LINESPEED | | | | 4 or 16 | |
| SSCP ID | | SSCPID | | | 0000 to FFFF | |
| Local LU Address | | | LOCADR | | 0 to 255 | **0** |
| Call Type | | | | | Call or Listen | **Listen** |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | | | |
| | SSAP | | | | | ***SYSGEN** |
| | LIND | SWTLINLST | | | | |
| | MAXFRAME | MAXFRAME | | | | **4060** |
| | | DSAP | | | | ***04** |
| | | LANACKFRQ | | | | **7** |
| | | LANMAXOUT | | | | **7** |
| | | LINKTYPE | | | | ***LAN** |
| | | SSAP | | | | ***04** |
| | | APPN | APPN | | | ***NO** |
| | | CTLD | CTL | | | |
| | | | LCLCTLSSN | | | ***YES** |
| | | | | AFP | | ***YES** |
| | | | | FORMFEED | | ***AUTOCUT** |
| **Note:** Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9. | | | | | | |

*Table 8 (Page 1 of 2). AS/400 SNA Token-Ring Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | Token-Ring Line Description (see topic 26) | APPC Controller Description (see topic 28) | APPC Device Description (see topic 30) | Printer Device Description (see topic 32) | | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Protocols | | | | | | |
| Enable SNA | | | | | Enable or Disable | **Enable** |
| Enable TCP/IP | | | | | Enable or Disable | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> Address | | | | | | |
| Alternate Address | | ADPTADR | | | 400000000000 to 7FFFFFFFFFFF | |
| MAC Address | | | | | | Display only |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration | | | | | | |
| Auto Start | | | | | Yes or No | |
| Ring Speed (Mbps) | LINESPEED | | | | 4 or 16 | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> SNA | | | | | | |
| XID Number | | EXCHID | | | 07100000 to 071FFFFF | **071**_____ |
| Remote Network Name | | | | | Up to 8 characters | |
| SNA Intervention Timer | | | | | 0 to 99 (Minutes) | |
| Local LU Name | | | RMTLOCNAME | RMTLOCNAME | Up to 8 characters | |
| Remote LU Name | | | LCLLOCNAME | LCLLOCNAME | Up to 8 characters | |
| Mode Name | | | MODE | MODE | Up to 8 characters | **QSPWTR** |
| Remote Address | ADPTADR | | | | 400000000000 to 7FFFFFFFFFFF | |
| Local Network Name | | RMTNETID | RMTNETID | RMTNETID | Up to 8 characters | |
| Control Point Name | | RMTCPNAME | | | Up to 8 characters | |
| SSCP ID | | SSCPID | | | 0000 to FFFF | |
| Local LU Address | | | LOCADR | | 0 to 255 | **0** |
| Call Type | | | | | Call or Listen | **Listen** |
| Solicit SSCP | | | | | Yes or No | **Yes** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | | |
| Source Attachment | | | | | | **SNA TOKEN RING** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | | |
| Enable IPDS | | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | | | |
| | SSAP | | | | | ***SYSGEN** |
| | LIND | SWTLINLST | | | | |

*Table 8 (Page 2 of 2). AS/400 SNA Token-Ring Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | Token-Ring Line Description (see topic 26) | APPC Controller Description (see topic 28) | APPC Device Description (see topic 30) | Printer Device Description (see topic 32) | | |
| | MAXFRAME | MAXFRAME | | | | **4060** |
| | | DSAP | | | | ***04** |
| | | LANACKFRQ | | | | **7** |
| | | LANMAXOUT | | | | **7** |
| | | LINKTYPE | | | | ***LAN** |
| | | SSAP | | | | ***04** |
| | | APPN | APPN | | | ***NO** |
| | | CTLD | CTL | | | |
| | | | LCLCTLSSN | | | ***YES** |
| | | | | AFP | | ***YES** |
| | | | | FORMFEED | | ***AUTOCUT** |

**Note:** Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9.

## SNA Token-Ring Attachment Configuration

Figure 4 shows a sample token-ring attachment configuration. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 24 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
XID number:                 071000F1
Remote network name:        APPN
SNA Intervention Timer:     99
Local LU name:              RLN3935
Remote LU name:             BLDJPOT
Mode name:                  QSPWTR
Remote address:             400044445555
Local network name:         APPN
Control point name:         RCP3935
Alternate address:          400023050000
Ring speed:                 16
SSCP ID:                    0000
Local LU address:           0
Call Type:                  Listen
```

*Figure 4. Sample AS/400 SNA Token-Ring Attachment Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Install Status** | Specify **Yes**. |
| **XID Number** | An ID that distinguishes a specific piece of equipment from all other similar pieces of equipment on the network.<br><br>This value must match the Exchange Identifier (EXCHID) value specified in the APPC Controller description (topic 28). |
| **Remote Network Name** | The name of the network that the host AS/400 belongs to. The value you specify for Remote Network Name should be the same as the Local Network ID of the host AS/400. To determine the local network ID, enter the command DSPNETA on the host AS/400. The response will include a line similar to this:<br><br>`Local network ID . . . . . : APPN`<br><br>where APPN (or the actual value you see in its place) is the value to specify. |
| **SNA Intervention Timer** | This timer defines how many minutes the printer waits before notifying the host that an attachment is not operating. The delay provides time to fix the problem at the printer without having an alert sent to the host. The timer can be set from 0 to 98 minutes. To turn the timer off, specify **99**. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Local LU Name** | The name of the local logical unit. This value must be unique within the network, and it must match:<br>• The Remote Location (RMTLOCNAME) parameter in the APPC Device description (topic 30).<br>• The Remote Location (RMTLOCNAME) parameter in the Printer Device description (topic 32). |
| **Remote LU Name** | The name of the AS/400 that owns the printer. This value must match:<br>• The Local Location (LCLLOCNAME) parameter in the APPC Device description (topic 30)<br>• The Local Location (LCLLOCNAME) parameter in the Printer Device description (topic 32).<br>To determine Local Location Name, enter the command DSPNETA on the AS/400. The response will include a line similar to this:<br>`Default local location . . . . . : BLDJPOT`<br>where BLDJPOT (or the actual value you see in its place) is the value to specify. |
| **Mode Name** | Unless you create your own mode, specify QSPWTR. Also, note that the value you specify for Mode Name must match:<br>• The Mode (MODE) parameter in the APPC Device description (topic 30)<br>• The Mode (MODE) parameter in the Printer Device description (topic 32). |
| **Remote Address** | The remote host token-ring adapter card address. This value must match the Local Adapter Address (ADPTADR) parameter in the Token-Ring Line description (topic 26). |
| **Local Network Name** | The name of the network the printer is attached to.<br>• If the printer is in the same network as the host AS/400 system, you can use the same value you specified for the Remote Network Name.<br>• If the printer and the host AS/400 system are in different networks, specify the name of the network the printer is in.<br>The value you specify for Local Network Name must also match the following:<br>• The Remote Network Identifier (RMTNETID) parameter in the host AS/400 APPC Controller description (topic 28).<br>• The Remote Network Identifier (RMTNETID) parameter in the host AS/400 APPC Device description (topic 30).<br>• The Remote Network Identifier (RMTNETID) parameter in the host AS/400 Printer Device description (topic 32). |
| **Control Point Name** | The name the AS/400 uses for its application control point. This value must match the Remote Control Point (RMTCPNAME) parameter in the APPC Controller description (topic 28), and it must be unique within the network. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Alternate Address** | Sets the LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. The value you specify for Alternate Address must match the LAN Remote Adapter Address (ADPTADR) parameter in the APPC Controller description (topic 28). |
| **Ring Speed** | The ring speed of the network the adapter is attached to. Specifying the wrong value can cause the network to stop operating.<br><br>The value you specify for Ring Speed must match the Line Speed (LINESPEED) parameter in the Token-Ring Line description (topic 26). |
| **SSCP ID** | This value must match the SSCP Identifier (SSCPID) parameter in the APPC Controller description (topic 28). Although the SSCP Identifier is 12 digits, you specify only the last four digits in the attachment configuration. The printer automatically sets the first eight digits to 0500 0000.<br><br>The printer uses this ID to send information to the host system's Netview Programs. If the host does not use Netview, or the SNA Intervention Timer is set to 99, set SSCP ID to 0000.<br><br>**Note:** Specify SSCP ID as a hexadecimal value. If the corresponding host value is in decimal, you must convert it to hexadecimal. |
| **Local LU Address** | The destination address used by other systems to send information to the local logical unit.<br><br>Set this value to **0**.<br><br>This value must match the Local Location Address (LOCADR) value in the APPC Device description (topic 30). |
| **Call Type** | Specifies how the host and printer make contact. Specify **Listen**, which means the printer waits, or "listens," for calls from the host. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Enable SNA** | Specifies whether the token ring is enabled or disabled for SNA. Specify **Enabled** (the default value). |
| **Enable TCP/IP** | Specifies whether the token ring is enabled or disabled for TCP/IP. The default is **Enabled**. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. You can use the MAC address as the alternate address for your printer. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **SNA Token Ring**. |
| **Enable IPDS** | Specify **ENABLED.**<br><br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Local LU Name** | **Note:** For the 3130 Release 2, Local LU name entered at the printer must not match the Remote LU Name entered at the printer, and must not match the control point name entered at the printer. |
| **Solicit SSCP** | This parameter should be set to **YES** except for OS/400 V2R2 and V2R3 environments. |

## Token-Ring Line Description (CRTLINTRN)

To create the token-ring line description, enter the CRTLINTRN command from an AS/400 command line. To update an existing description, use the CHGLINTRN command.

Figure 5 shows a sample token-ring line description for a token-ring attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
Line description . . . . . :   LIND        LINETRN
Option . . . . . :   OPTION      *ALL
Category of line . . . . . :                *TRLAN
Resource name  . . . . . :   RSRCNAME    LIN021
Online at IPL  . . . . . :   ONLINE      *YES
Vary on wait . . . . . :   VRYWAIT     *NOWAIT
Network controller . . . . . :   NETCTL      TRLANNET
Maximum controllers  . . . . . :   MAXCTL      40
Line speed . . . . . :   LINESPEED   16M
Maximum frame size . . . . . :   MAXFRAME    4060
TRLAN manager logging level  . . . :   TRNLOGLVL   *MED
  Current logging level  . . . . . :                  *MED
TRLAN manager mode . . . . . :   TRNMGRMODE  *OBSERVING
Log configuration changes  . . . . :   LOGCFGCHG   *LOG
Token-ring inform of beacon  . . . :   TRNINFBCN   *YES
Local adapter address  . . . . . :   ADPTADR     400044445555
Exchange identifier  . . . . . :   EXCHID      056E00E6
Error threshold level  . . . . . :   THRESHOLD   *OFF
Text . . . . . :   TEXT        Token-ring line description
SSAP list  . . . . . :   SSAP        *SYSGEN
----Source Service Access Points-----   ----Source Service Access Points-----
   SSAP      Maximum Frame    Type          SSAP      Maximum Frame    Type
    04         *MAXFRAME      *SNA           AA         *MAXFRAME      *NONSNA
    06         *MAXFRAME      *NONSNA
Link speed . . . . . :   LINKSPEED   16M
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
Autocreate controller  . . . . . :   AUTOCRTCTL  *NO
Recovery limits  . . . . . :   CMNRCYLMT
  Count limit  . . . . . :                2
  Time interval  . . . . . :                5
Functional address . . . . . :   FCNADR
 --------------------Functional Addresses----------------------
   (No functional addresses found)
```

*Figure 5. Sample Token-Ring Line Description (SNA)*

| Field | Notes |
|---|---|
| **Line Description** | This value must match the Switched Line List (SWTLINLST) value in the APPC Controller description (topic 28). |
| **Line Speed** | Specify **4** if the speed is 4 Mbps; specify **16** if the speed is 16 Mbps. |

| Field | Notes |
|---|---|
| **Maximum Frame Size** | Specify **4060** to permit the printer to use its maximum value of 3840. If you specify a value less than 4060, the printer adjusts its frame size accordingly. If you need to set Maximum Frame Size to a higher value in order to accommodate other controllers using this line, you can do so.<br><br>The value you specify for Maximum Frame Size in the Token-Ring Line description must be greater than or equal to the value you specify for the Maximum Frame Size (MAXFRAME) parameter in the APPC Controller description (topic 28). |
| **Local Adapter Address** | The value you specify must match the Remote Address value in the Token-Ring Attachment configuration (topic 22). |
| **SSAP list** | Specify ***SYSGEN**. |

## APPC Controller Description (CRTCTLAPPC)

To create the APPC controller description, enter the CRTCTLAPPC command from an AS/400 command line. To update an existing description, use the CHGCTLAPPC command.

Figure 6 shows a sample APPC Controller description for a token-ring attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
Controller description . . . . . :   CTLD        CTL3935
Option . . . . . :   OPTION      *ALL
Category of controller . . . . . :               *APPC
Link type  . . . . . :   LINKTYPE    *LAN
Online at IPL  . . . . . :   ONLINE      *YES
Active switched line . . . . . :               LINETRN
Character code . . . . . :   CODE        *EBCDIC
Maximum frame size . . . . . :   MAXFRAME    4060
Remote network identifier  . . . . :   RMTNETID    APPN
Remote control point . . . . . :   RMTCPNAME   RCP3935
Exchange identifier  . . . . . :   EXCHID      071000F1
SSCP identifier  . . . . . :   SSCPID      050000000000
Initial connection . . . . . :   INLCNN      *DIAL
Dial initiation  . . . . . :   DIALINIT    *LINKTYPE
Switched disconnect  . . . . . :   SWTDSC      *NO
Data link role . . . . . :   ROLE        *NEG
LAN remote adapter address . . . . :   ADPTADR     400023050000
LAN DSAP . . . . . :   DSAP        04
LAN SSAP . . . . . :   SSAP        04
Autocreate device  . . . . . :   AUTOCRTDEV  *ALL
Text . . . . . :   TEXT        APPC controller description
Switched line list . . . . . :   SWTLINLST
-------------------Switched Lines--------------------
LINETRN
Attached devices . . . . . :   DEV
-------------------Attached Devices--------------------
DEV3935
APPN-capable . . . . . :   APPN        *NO
Disconnect timer . . . . . :   DSCTMR
  Minimum connect timer  . . . . . :               240
  Disconnection delay timer  . . . :               60
LAN frame retry  . . . . . :   LANFRMRTY   *CALC
LAN connection retry . . . . . :   LANCNNRTY   *CALC
LAN response timer . . . . . :   LANRSPTMR   *CALC
LAN connection timer . . . . . :   LANCNNTMR   *CALC
LAN acknowledgement timer  . . . . :   LANACKTMR   *CALC
LAN inactivity timer . . . . . :   LANINACTMR  *CALC
LAN acknowledgement frequency  . . :   LANACKFRQ   7
LAN max outstanding frames . . . . :   LANMAXOUT   7
LAN access priority  . . . . . :   LANACCPTY   *CALC
LAN window step  . . . . . :   LANWDWSTP   *NONE
Recovery limits  . . . . . :   CMNRCYLMT
  Count limit  . . . . . :               2
  Time interval  . . . . . :               5
```

*Figure 6. Sample APPC Controller Description (Token Ring SNA)*

| Field | Notes |
|---|---|
| **Controller Description** | This value must match the Attached Controller (CTL) value in the APPC Device description (topic 30). |
| **Link Type** | Specify ***LAN** for a token-ring network. |

| Field | Notes |
|---|---|
| **Maximum Frame Size** | Specify **4060** to permit the printer to use its maximum value of 3840. If you specify a value less than 4060, the printer adjusts its frame size accordingly.<br><br>The value you specify for Maximum Frame Size must be less than or equal to the value you specify for the Maximum Frame Size (MAXFRAME) parameter in the Token-Ring Line description (topic 26). |
| **Remote Network Identifier** | Specify the name of the network in which the printer resides.<br><br>The value you specify for Remote Network Identifier must be specified for all of the following:<br>• The Local Network Name parameter in the Token-Ring Attachment configuration (topic 22).<br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Device description (topic 30).<br>• The Remote Network Identifier (RMTNETID) parameter in the Printer Device description (topic 32).<br><br>**Note:** You can specify *NETATR to “pick up” the local network ID for RMTNETID; however, you must explicitly specify the local network ID for the Local Network Name in the Token-Ring Attachment configuration. |
| **Remote Control Point** | The name the AS/400 uses for its application control point. This value must match the Control Point name specified in the Token-Ring Attachment configuration (topic 22).<br><br>**Important**<br>The remote control point name must be unique within a network. |
| **Exchange Identifier** | This value must match the XID number in the Token-Ring Attachment configuration (topic 22). The first three characters, called the block ID, must be **071**. |
| **SSCP Identifier** | The last four digits of this value must match the SSCP ID value in the Token-Ring Attachment configuration (topic 22). The first eight digits must be **0500 0000**. If you do not specify a value, the printer will not send alerts to the AS/400 system.<br><br>Use the Change Network Attributes (CHGNETA) command to enable alerts on an AS/400 system. If the problem management focal point in your network is not an AS/400 system, refer to the appropriate documentation for information on enabling alerts. |
| **LAN Remote Adapter Address** | This value must match the Alternate Address in the Token-Ring Attachment configuration (topic 22). |
| **LAN DSAP** | Specify **04**, the default value. |
| **LAN SSAP** | Specify **04**, the default value. |
| **Switched Line List** | This value must match the line description (LIND) value in the Token-Ring Line description (topic 26). |
| **LAN acknowledgement frequency** | Specify **7**. |
| **LAN max outstanding frames** | Specify **7**. |

## APPC Device Description (CRTDEVAPPC)

To create the APPC device description, enter the CRTDEVAPPC command from an AS/400 command line. To update an existing description, use the CHGDEVAPPC command.

Figure 7 shows a sample APPC Device description for a token-ring attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
Device description . . . . . :   DEVD        DEV3935
Option . . . . . :   OPTION      *ALL
Category of device . . . . . :                *APPC
Remote location  . . . . . :   RMTLOCNAME  RLN3935
Online at IPL  . . . . . :   ONLINE      *YES
Local location . . . . . :   LCLLOCNAME  BLDJPOT
Remote network identifier  . . . . :   RMTNETID    APPN
Attached controller  . . . . . :   CTL         CTL3935
Message queue  . . . . . :   MSGQ        QSYSOPR
  Library  . . . . . :                      *LIBL
Local location address . . . . . :   LOCADR      00
APPN-capable . . . . . :   APPN        *NO
Single session . . . . . :   SNGSSN
  Single session capable . . . . . :                *YES
  Number of conversations  . . . . :                1
Locally controlled session . . . . :   LCLCTLSSN   *YES
Pre-established session  . . . . . :   PREESTSSN   *NO
Secure location  . . . . . :   SECURELOC   *NO
Text . . . . . :   TEXT        APPC Device description
Mode . . . . . :   MODE
------------------------Mode--------------------------
QSPWTR
```

*Figure 7. Sample APPC Device Description (Token Ring SNA)*

| Field | Notes |
|---|---|
| **Remote Location** | This value must match both of the following:<br>• The Remote Location (RMTLOCNAME) parameter Printer Device description (topic 32).<br>• The Local LU Name parameter in the Token-Ring Attachment configuration (topic 22).<br>**Important**<br>This value must be unique within a network. |

| Field | Notes |
|---|---|
| **Local Location** | Specify the default local location of the AS/400 that owns the printer. To determine the default local location, enter the command DSPNETA on the AS/400. The response will include a line similar to this:<br>`Default local location . . . . . : BLDJPOT`<br>where BLDJPOT (or the actual value you see in its place) is the value to specify.<br>Local Location must match:<br>• The Remote LU Name parameter in the Token-Ring Attachment configuration (topic 22).<br>• The Local Location (LCLLOCNAME) parameter in the Printer Device description (topic 32).<br>**Note:** You can specify *NETATR to “pick up” the default local location for LCLLOCNAME; however, you must explicitly specify the default local location for the Remote LU Name in the Token-Ring Attachment configuration. |
| **Remote Network Identifier** | Specify the name of the network in which the printer resides.<br>The value you specify for Remote Network Identifier must be specified for all of the following:<br>• The Local Network Name value in the Token-Ring Attachment configuration (topic 22).<br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Controller description (topic 28).<br>• The Remote Network Identifier (RMTNETID) parameter in the Printer Device description (topic 32).<br>**Note:** You can specify *NETATR to “pick up” the local network ID for RMTNETID; however, you must explicitly specify the local network ID for the Local Network Name in the Token-Ring Attachment configuration (topic 22). |
| **Attached Controller** | This value must match the Controller Description (CTLD) value in the APPC Controller description (topic 28). |
| **Local Location Address** | Specify **0**. This must also match the Local LU address parameter in the Token-Ring Attachment configuration (topic 22). |
| **Single session capable** | Specify ***YES**. |
| **Number of conversations** | Specify **1**. |
| **Locally controlled session** | Specify ***Yes**. |
| **Mode** | Unless you create your own mode, specify **QSPWTR**. Also, note that the value you specify for Mode must be specified for the following:<br>• The Mode (MODE) parameter in the Printer Device description (topic 32).<br>• The Mode name value in the Token-Ring Attachment configuration (topic 22). |

## Printer Device Description (CRTDEVPRT)

To create the Printer Device description, enter the CRTDEVPRT command from an AS/400 command line. To update an existing description, use the CHGDEVPRT command.

Figure 8 shows a sample Printer Device description for a token-ring attachment. Highlighted values are required or recommended, or they must match another configuration value.

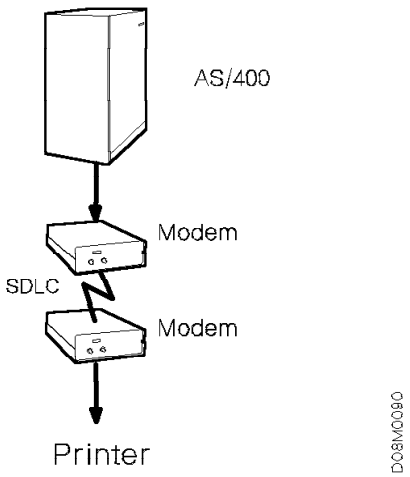
```
Device description . . . . . :   DEVD        PRT3935
Option . . . . . :   OPTION      *ALL
Category of device . . . . . :                *PRT
Automatically created  . . . . . :            NO
Device class . . . . . :   DEVCLS      *RMT
Device type  . . . . . :   TYPE        *IPDS
Device model . . . . . :   MODEL       0
Advanced function printing . . . . :   AFP         *YES
AFP attachment . . . . . :   AFPATTACH   *APPC
Online at IPL  . . . . . :   ONLINE      *YES
Font . . . . . :   FONT
  Identifier . . . . . :                  011
  Point size . . . . . :                  *NONE
Form feed  . . . . . :   FORMFEED    *AUTOCUT
Separator drawer . . . . . :   SEPDRAWER   *FILE
Separator program  . . . . . :   SEPPGM      *NONE
  Library  . . . . . :
Printer error message  . . . . . :   PRTERRMSG   *INQ
Message queue  . . . . . :   MSGQ        QSYSOPR
  Library  . . . . . :                    *LIBL
Maximum pending requests . . . . . :   MAXPNDRQS   6
Print while converting . . . . . :   PRTCVT      *YES
Form definition  . . . . . :   FORMDF      F1C10110
  Library  . . . . . :                    *LIBL
Character identifier . . . . . :   CHRID       *SYSVAL
Remote location  . . . . . :   RMTLOCNAME  RLN3935
Local location . . . . . :   LCLLOCNAME  BLDJPOT
Remote network identifier  . . . . :   RMTNETID    APPN
Mode . . . . . :   MODE        QSPWTR
Text . . . . . :   TEXT        Printer description
```

*Figure 8. Sample Printer Device Description (Token Ring SNA)*

| Field | Notes |
|---|---|
| **Advanced Function Printing** | Specify ***YES**. |
| **Form Feed** | Specify ***AUTOCUT**. |
| **Remote Location** | This must match both of the following:<br>• The Remote Location (RMTLOCNAME) parameter in the APPC Device description (topic 30).<br>• The Local LU Name parameter in the Token-Ring Attachment configuration (topic 22). |

| Field | Notes |
|---|---|
| **Local Location** | Specify the default local location of the AS/400 that owns the printer. To determine the default local location, enter the command DSPNETA on the AS/400. The response will include a line similar to this:<br><br>`Default local location . . . . . : BLDJPOT`<br><br>where BLDJPOT (or the actual value you see in its place) is the value to specify.<br><br>Local Location must match:<br>• The Remote LU Name parameter in the Token-Ring Attachment configuration (topic 22).<br>• The Local Location (LCLLOCNAME) parameter value in the APPC Device description (topic 30).<br><br>**Note:** You can specify *NETATR to “pick up” the default local location for LCLLOCNAME; however, you must explicitly specify the default local location for the Remote LU Name in the Token-Ring Attachment configuration. |
| **Remote Network Identifier** | Specify the name of the network in which the printer resides.<br><br>The value you specify for Remote Network Identifier must be specified for all of the following:<br>• The Local Network Name value in the Token-Ring Attachment configuration (topic 22).<br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Controller description (topic 28).<br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Device description (topic 30).<br><br>**Note:** You can specify *NETATR to “pick up” the local network ID for RMTNETID; however, you must explicitly specify the local network ID for the Local Network Name in the token-ring attachment description. |
| **Mode** | Unless you create your own mode, specify **QSPWTR**. Also, note that the value you specify for Mode must be specified for the following:<br>• The Mode (MODE) parameter in the APPC Device description (topic 30).<br>• The Mode Name parameter in the Token-Ring Attachment configuration (topic 22). |

# Chapter 4. AS/400 SDLC Attachment




*AS/400 SDLC Attachment*. Note that the modems and leased line can be replaced by a modem eliminator.

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and SDLC attachment:

- Complete the attachment worksheet for your printer.
- Create the SDLC line description. See "SDLC Line Description (CRTLINSDLC)" on page 43.
- Create the APPC controller description. See "APPC Controller Description (CRTCTLAPPC)" on page 45.
- Create the APPC Device description. See "APPC Device Description (CRTDEVAPPC)" on page 47.
- Create the Printer Device description. See "Printer Device Description (CRTDEVPRT)" on page 49.

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

For more information about requirements, refer to:

- Chapter 1, "Read This Chapter First" on page 1
- *Advanced Function Presentation: Printer Information*, G544-3290
- The Introduction and Planning Guide for your printer

## SDLC Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the SDLC attachment parameters in the leftmost column. You must complete the **Value to Use** column for all SDLC attachment parameters before the customer engineer can install the SDLC attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- The **Acceptable Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the only column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

→ The lower part of the worksheet lists AS/400 configuration parameters that do not correspond to SDLC attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the AS/400 environment is set up properly for the SDLC attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 9. AS/400 SDLC Attachment Configuration Worksheet*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | SDLC Line Description (see topic 43) | APPC Controller Description (see topic 45) | APPC Device Description (see topic 47) | Printer Device Description (see topic 49) | | |
| Installed | | | | | Yes or No | **Yes** |
| Encoding | NRZI | | | | NRZI or NRZ | |
| Request to Send | DUPLEX | | | | Continuous or Controlled | |
| Station Address | | STNADR | | | 01 to FE | |
| XID Number | | EXCHID | | | 07100000 to 0710FFFF | **071**_____ |
| Remote Network Name | | | | | Up to 8 characters | |
| SNA Intervention Timer | | | | | 0 to 99 (Minutes) | |
| SDLC Type | LINESPEED<br>LINKSPEED<br>INTERFACE | | | | EIA 232 or V.35 | |
| Local LU Name | | | RMTLOCNAME | RMTLOCNAME | Up to 8 characters | |
| Remote LU Name | | | LCLLOCNAME | LCLLOCNAME | Up to 8 characters | |
| Mode Name | | | MODE | MODE | Up to 8 characters | **QSPWTR** |
| Local Network Name | | RMTNETID | RMTNETID | RMTNETID | Up to 8 characters | |
| Control Point Name | | | | | Up to 8 characters | |
| SSCP ID | | SSCPID | | | 0000 to FFFF | |
| Local LU Address | | | LOCADR | | 0 to 255 | **0** |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | | | |
| | CNN | | | | | ***NONSWTPP** |
| | LIND | LINE | | | | |
| | MAXFRAME | MAXFRAME | | | | **2057** |
| | | LINKTYPE | | | | ***SDLC** |
| | | SWITCHED | | | | ***NO** |
| | | APPN | APPN | | | ***NO** |
| | | CTLD | CTL | | | |
| | | | | AFP | | ***YES** |
| | | | | FORMFEED | | ***AUTOCUT** |
| **Note:** Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9. | | | | | | |

*Table 10 (Page 1 of 2). AS/400 SDLC Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | SDLC Line Description (see topic 43) | APPC Controller Description (see topic 45) | APPC Device Description (see topic 47) | Printer Device Description (see topic 49) | | |
| **Note:** The menu tree for the following parameters is Attachments -> SDLC -> Configuration | | | | | | |
| Encoding | NRZI | | | | NRZI or NRZ | |
| Request to Send | DUPLEX | | | | Continuous or Controlled | |
| Station Address | | STNADR | | | 01 to FE | |
| XID Number | | EXCHID | | | 07100000 to 0710FFFF | **071**_____ |
| Remote Network Name | | | | | Up to 8 characters | |
| SNA Intervention Timer | | | | | 0 to 99 (Minutes) | |
| SDLC Type | LINESPEED<br>LINKSPEED<br>INTERFACE | | | | EIA 232 or V.35 | |
| Local LU Name | | | RMTLOCNAME | RMTLOCNAME | Up to 8 characters | |
| Remote LU Name | | | LCLLOCNAME | LCLLOCNAME | Up to 8 characters | |
| Mode Name | | | MODE | MODE | Up to 8 characters | **QSPWTR** |
| Local Network Name | | RMTNETID | RMTNETID | RMTNETID | Up to 8 characters | |
| Control Point Name | | | | | Up to 8 characters | |
| SSCP ID | | SSCPID | | | 0000 to FFFF | |
| Local LU Address | | | LOCADR | | 0 to 255 | **0** |
| Solicit SSCP | | | | | Yes or No | **YES** |
| Auto Start | | | | | Yes or No | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | | |
| Source Attachment | | | | | | **SNA SDLC** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | | |
| Enable IPDS | | | | | Enable or Disable | **enable** |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | | | |
| | CNN | | | | | ***NONSWTPP** |
| | LIND | LINE | | | | |
| | MAXFRAME | MAXFRAME | | | | **2057** |
| | | LINKTYPE | | | | ***SDLC** |
| | | SWITCHED | | | | ***NO** |
| | | APPN | APPN | | | ***NO** |
| | | CTLD | CTL | | | |
| | | | | AFP | | ***YES** |

*Table 10 (Page 2 of 2). AS/400 SDLC Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | SDLC Line Description (see topic 43) | APPC Controller Description (see topic 45) | APPC Device Description (see topic 47) | Printer Device Description (see topic 49) | | |
| | | | | FORMFEED | | *AUTOCUT |

**Note:** Names can be one to eight characters. 0–9, A – Z, $, #, and @ are permitted, but the first character cannot be 0–9.

## SDLC Attachment Configuration

Figure 9 shows a sample SDLC attachment configuration. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 42 for a description of parameters unique to the 3130 Release 2.

```
Installed                    Yes
Encoding                     NRZI
Request to send              Controlled
Station Address              01
XID Number                   071000F2
Remote Network Name          APPN
SNA Intervention Timer       99
SDLC Type                    EIA 232
Local LU Name                RLN3935
Remote LU Name               BLDJPOT
Mode Name                    QSPWTR
Local Network Name           APPN
Control Point Name           APPN
SSCP ID                      0000
Local LU Address             0
```

*Figure 9. Sample AS/400 SDLC Attachment Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Install Status** | Specify **Yes**. |
| **Encoding** | This value depends on the NRZI Data Encoding parameter in the SDLC Line description (topic 43).<br>• If the NRZI Data Encoding parameter is set to *YES, set Encoding to **NRZI**.<br>• If the NRZI Data Encoding parameter is set to *NO, set Encoding to **NRZ**. |
| **Request to Send** | Request to Send must correspond to the Duplex parameter in the SDLC Line description (topic 43).<br>• If you set DUPLEX to *HALF, the default, set the Request to Send parameter to **Controlled**.<br>• If you set DUPLEX to *FULL, set the Request to Send parameter to **Continuous**. |
| **Station Address** | The destination address that the AS/400 uses to send information to the local logical unit (LU).<br>This value must match the STNADR value in the APPC Controller description (topic 45). |
| **XID Number** | An ID that distinguishes a specific piece of equipment from all other similar pieces of equipment on the network.<br>This value must match the EXCHID value in the APPC Controller description (topic 45). The first three digits must be **071**. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Remote Network Name** | The name of the network that the host AS/400 belongs to. The value you specify for Remote Network Name should be the same as the Local Network ID of the host AS/400. To determine the local network ID, enter the command DSPNETA on the AS/400. The response will include a line similar to this:<br>`Local network ID . . . . . : APPN`<br>where APPN (or the actual value you see in its place) is the value to specify for Remote Network Name in the SDLC attachment configuration. |
| **SNA Intervention Timer** | This timer defines how many minutes the printer waits before notifying the host that an attachment is not operating. The delay provides time to fix the problem at the printer without having an alert sent to the host. The timer can be set from 0 to 98 minutes. To turn the timer off, specify **99**. |
| **SDLC Type** | Specify SDLC type as follows:<br>• For a V.24/19.2Kb line, specify **EIA 232**<br>• For a V.35/56Kb line, specify **V.35**<br>The value you specify for the Line Speed (LINESPEED), Link Speed (LINKSPEED), and Physical Interface (INTERFACE) parameters in the SDLC Line description (topic 43) also must correspond to the SDLC type you use. |
| **Local LU Name** | The name of the local logical unit. This value must match:<br>• The Remote Location (RMTLOCNAME) parameter in the APPC Device description (topic 47)<br>• The Remote Location (RMTLOCNAME) parameter in the Printer Device description (topic 49) |
| **Remote LU Name** | The name of the AS/400 that owns the printer. This value must match:<br>• The Local Location (LCLLOCNAME) parameter in the APPC Device description (topic 47)<br>• The Local Location (LCLLOCNAME) parameter in the Printer Device description (topic 49). |
| **Mode Name** | Unless you create your own mode, specify **QSPWTR**. Also, note that the value you specify for Mode Name must be specified for the following:<br>• The Mode (MODE) parameter in the APPC Device description (topic 47).<br>• The Mode (MODE) parameter in the Printer Device description (topic 49). |

| Printer Attachment Parameter | Notes |
|---|---|
| **Local Network Name** | The name of the network the printer is attached to.<br>• If the printer is in the same network as the host AS/400 system, you can use the same value you specified for the Remote Network Name.<br>• If the printer and the host AS/400 system are in different networks, specify the name of the network the printer is in.<br>The value you specify for Local Network Name must also be specified for all of the following:<br>• The Remote Network Identifier (RMTNETID) parameter in the host AS/400 APPC Controller description (topic 45).<br>• The Remote Network Identifier (RMTNETID) parameter in the host AS/400 APPC Device description (topic 47).<br>• The Remote Network Identifier (RMTNETID) parameter in the host Printer Device description (topic 49). |
| **Control Point Name** | Specify the same value as the one you use for Remote Network Name. |
| **SSCP ID** | This value must match the SSCP Identifier (SSCPID) parameter in the APPC Controller description (topic 45). Although the SSCP Identifier is 12 digits, you specify only the last four digits in the attachment configuration. The printer automatically sets the first eight digits to 0500 0000.<br>The printer uses this ID to send information to the host system's Netview Programs. If the host does not use Netview, or the SNA Intervention Timer is set to 99, set SSCP ID to 0000.<br>**Note:** Specify SSCP ID as a hexadecimal value. If the corresponding host value is in decimal, you must convert it to hexadecimal. |
| **Local LU Address** | The destination address used by other systems to send information to the local logical unit.<br>Set this value to **0**.<br>This value must match the Local Location Address (LOCADR) value in the APPC Device description (topic 47). |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **SNA SDLC**. |
| **Enable IPDS** | Specify **ENABLED.**<br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |
| **Solicit SSCP** | This parameter should be set for **YES** except for OS/400 V2R2 and V2R3 environments. |

## SDLC Line Description (CRTLINSDLC)

To create the SDLC line description, enter the CRTLINSDLC command from an AS/400 command line. To update an existing description, use the CHGLINSDLC command.

Figure 10 shows a sample SDLC line description for a V.24/19.2Kb SDLC attachment. For V.35, specify different values for Physical Interface, Line Speed, and Link Speed. Highlighted values are required or recommended, or they must match another configuration value.

```
Line description . . . . . :  LIND        LINESDLC
Option . . . . . :  OPTION      *BASIC
Category of line . . . . . :                *SDLC

Resource names . . . . . :  RSRCNAME    LIN011
Online at IPL  . . . . . :  ONLINE      *YES
Data link role . . . . . :  ROLE        *NEG
Physical interface . . . . . :  INTERFACE   *RS232V24
Connection type  . . . . . :  CNN         *NONSWTPP
Switched network backup  . . . . :  SNBU        *NO
Exchange identifier  . . . . . :  EXCHID      05643562
NRZI data encoding . . . . . :  NRZI        *YES
Maximum controllers  . . . . . :  MAXCTL      1
Clocking . . . . . :  CLOCK       *MODEM
Line speed . . . . . :  LINESPEED   19200
Modem type supported . . . . . :  MODEM       *NORMAL
Modem data rate select . . . . . :  MODEMRATE   *FULL
Autoanswer type  . . . . . :  AUTOANSTYP  *DTR
Maximum frame size . . . . . :  MAXFRAME    2057 (265,521,1033,2057)
Error threshold level  . . . . . :  THRESHOLD   *OFF
Duplex . . . . . :  DUPLEX      *HALF
Modulus  . . . . . :  MODULUS     8
Text . . . . . :  TEXT        SDLC line description

Attached nonswitch controllers . :  CTL

----------Attached Nonswitched Controllers---------

CTL3935

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

Maximum outstanding frames . . . :  MAXOUT      7
Inactivity timer . . . . . :  INACTTMR    300
Poll response delay  . . . . . :  POLLRSPDLY  0
Nonproductive receive timer  . . :  NPRDRCVTMR  320
Idle timer . . . . . :  IDLTMR      30
Connect poll timer . . . . . :  CNNPOLLTMR  30
Poll cycle pause . . . . . :  POLLPAUSE   0
Frame retry  . . . . . :  FRAMERTY    7
Data Set Ready drop timer  . . . :  DSRDRPTMR   6
Clear To Send timer  . . . . . :  CTSTMR      25
Remote answer timer  . . . . . :  RMTANSTMR   60
Recovery limits  . . . . . :  CMNRCYLMT
    Count limit  . . . . . :                2
    Time interval  . . . . . :                5
```

*Figure 10. Sample SDLC Line Description*

| Field | Notes |
|---|---|
| **Line Description** | This value must match the Attached Nonswitched Line (LINE) value in the APPC Controller description (topic 45). |
| **Physical Interface** | Specify this as follows:<br>• For a V.24/19.2Kb line, specify ***RS232V24**.<br>• For a V.35/56Kb line, specify ***V35**. |
| **Connection Type** | Specify ***NONSWTPP**, the default value. |
| **NRZI Data Encoding** | This value corresponds to the Encoding parameter in the SDLC Attachment configuration (topic 40).<br>• If the NRZI Data Encoding parameter is set to *YES, set Encoding to **NRZI**.<br>• If the NRZI Data Encoding parameter is set to *NO, set Encoding to **NRZ**. |
| **Line Speed** | Specify this as follows:<br>• For a V.24/19.2Kb line, specify **19200**.<br>• For a V.35/56Kb line, specify **56000**. |
| **Maximum Frame Size** | Specify **2057** to permit the printer to use its maximum value. If you specify a value less than 2057, the printer adjusts its frame size accordingly.<br>The value you specify for Maximum Frame Size must match the value you specify for the Maximum Frame Size (MAXFRAME) parameter in the APPC Controller description (topic 45). |
| **Duplex** | Duplex must correspond to the Request to Send parameter in the SDLC Attachment configuration (topic 40).<br>• If you set DUPLEX to *HALF, the default, set the Request to Send parameter to **Controlled**.<br>• If you set DUPLEX to *FULL, set the Request to Send parameter to **Continuous**. |
| **Link Speed** | Specify this as follows:<br>• For a V.24/19.2Kb line, specify **9600**.<br>• For a V.35/56Kb line, specify **48000**. |

## APPC Controller Description (CRTCTLAPPC)

To create the APPC controller description, enter the CRTCTLAPPC command from an AS/400 command line. To update an existing description, use the CHGCTLAPPC command.

Figure 11 shows a sample APPC Controller description for an SDLC attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
Controller description . . . . . :  CTLD        CTL3935
Option . . . . . :  OPTION      *BASIC
Category of Controller . . . . . :              *APPC

Link type  . . . . . :  LINKTYPE    *SDLC
Online at IPL  . . . . . :  ONLINE      *YES
Switched connection  . . . . . :  SWITCHED    *NO
Switched network backup  . . . . :  SNBU        *NO
Attached nonswitched line  . . . :  LINE        LINESDLC
Character code . . . . . :  CODE        *EBCDIC
Maximum frame size . . . . . :  MAXFRAME    2057
Remote network identifier  . . . :  RMTNETID    APPN
Exchange identifier  . . . . . :  EXCHID      071000F2
SSCP     identifier  . . . . . :  SSCPID      050000000000
Data link role . . . . . :  ROLE        *NEG
Station address  . . . . . :  STNADR      01
Text . . . . . :  TEXT        APPC Controller description

Attached devices . . . . . :  DEV

----------Attached Devices-------------------------

DEV3935

APPN-capable . . . . . :  APPN        *NO

SDLC poll priority . . . . . :  POLLPTY     *NO
SDLC poll limit  . . . . . :  POLLLMT     0
SDLC out limit . . . . . :  OUTLMT      *POLLLMT
SDLC connect poll retry  . . . . :  CNNPOLLRTY  *NOMAX
SDLC NDM poll timer  . . . . . :  NDMPOLLTMR  *CALC
Recovery limits  . . . . . :  CMNRCYLMT
   Count limit . . . . . :              2
   Time interval . . . . . :            5
```

*Figure 11. Sample APPC Controller Description (SDLC)*

| Field | Notes |
|---|---|
| **Controller Description** | This value must match the Attached Controller (CTL) value in the APPC Device description (topic 47). |
| **Link Type** | Link Type must be ***SDLC**. |
| **Switched Connection** | Specify ***NO**, the default value. |
| **Attached Nonswitched Line** | This must match the LIND parameter in the SDLC Line description (topic 43). |
| **Maximum Frame Size** | Specify **2057** to permit the printer to use its maximum value. If you specify a value less than 2057, the printer adjusts its frame size accordingly.<br><br>The value you specify for Maximum Frame Size must match the value you specify for the Maximum Frame Size (MAXFRAME) parameter in the SDLC Line description (topic 43). |

| Field | Notes |
|---|---|
| **Remote Network Identifier** | Specify the name of the network in which the printer resides.<br><br>The value you specify for Remote Network Identifier must be specified for all of the following:<br><br>• The Local Network Name value in the SDLC Attachment configuration (topic 40).<br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Device description (topic 47).<br>• The Remote Network Identifier (RMTNETID) parameter in the Printer Device description (topic 49).<br><br>**Note:** You can specify *NETATR to “pick up” the local network ID for RMTNETID; however, you must explicitly specify the local network ID for the Local Network Name in the SDLC Attachment configuration. |
| **Exchange Identifier** | This value must match the XID number in the SDLC Attachment configuration (topic 40). The first three characters, called the block ID, must be **071**. |
| **SSCP Identifier** | The last four digits of this value must match the SSCP ID value in the SDLC Attachment configuration (topic 40). The first eight digits must be **0500 0000**. If the AS/400 does not use Netview, or the SNA Intervention Timer is set to 99, set this value to 0000. If you do not specify a value, the printer will not send alerts to the AS/400 system.<br><br>Use the Change Network Attributes (CHGNETA) command to enable alerts on an AS/400 system. If the problem management focal point in your network is not an AS/400 system, refer to the appropriate documentation for information on enabling alerts. |
| **Station Address** | Station Address must match the Station Address value in the SDLC Attachment configuration (topic 40). |

## APPC Device Description (CRTDEVAPPC)

To create the APPC device description, enter the CRTDEVAPPC command from an AS/400 command line. To update an existing description, use the CHGDEVAPPC command.

Figure 12 shows a sample APPC device description for an SDLC attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
Device description . . . . . :  DEVD        DEV3935
Option . . . . . :  OPTION      *BASIC
Category of device . . . . . :              *APPC

Remote location  . . . . . :  RMTLOCNAME  RLN3935
Online at IPL  . . . . . :  ONLINE      *YES
Local location . . . . . :  LCLLOCNAME  BLDJPOT
Remote network identifier  . . . :  RMTNETID    APPN
Attached controller  . . . . . :  CTL         CTL3935
Message queue  . . . . . :  MSGQ        QSYSOPR
  Library  . . . . . :                    *LIBL
Local location address . . . . . :  LOCADR      00
APPN-capable . . . . . :  APPN        *NO
Single session . . . . . :  SNGSSN
  Single session capable . . . . :              *YES
  Number of conversations  . . . :              1
Locally controlled session . . . :  LCLCTLSSN   *YES
Secure location  . . . . . :  SECURELOC   *NO
Text . . . . . :  TEXT        APPC device description

Mode . . . . . :  MODE

--------------------Mode---------------------------
QSPWTR
```

*Figure 12. Sample APPC Device Description (SDLC)*

| Field | Notes |
|---|---|
| **Remote Location** | Remote Location must match both of the following:<br>• The Remote Location (RMTLOCNAME) parameter in the Printer Device description (topic 49)<br>• The Local LU Name parameter in the SDLC Attachment configuration (topic 40).<br>**Important**<br>This value must be unique within a network. |

| Field | Notes |
|---|---|
| **Local Location** | Specify the default local location of the AS/400 that owns the printer. To determine the default local location, enter the command DSPNETA on the AS/400. The response will include a line similar to this:<br><br>`Default local location . . . . . : BLDJPOT`<br><br>where BLDJPOT (or the actual value you see in its place) is the value to specify.<br><br>Local Location must match:<br>• The Remote LU Name parameter in the SDLC Attachment configuration (topic 40).<br>• The Local Location (LCLLOCNAME) parameter value in the Printer Device description (topic 49).<br><br>**Note:** You can specify *NETATR to “pick up” the default local location for LCLLOCNAME; however, you must explicitly specify the default local location for the Remote LU Name in the SDLC Attachment configuration. |
| **Remote Network Identifier** | Specify the name of the network in which the printer resides.<br><br>The value you specify for Remote Network Identifier must be specified for all of the following:<br>• The Local Network Name value in the SDLC Attachment configuration (topic 40).<br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Controller description (topic 45).<br>• The Remote Network Identifier (RMTNETID) parameter in the Printer Device description (topic 49).<br><br>**Note:** You can specify *NETATR to “pick up” the local network ID for RMTNETID; however, you must explicitly specify the local network ID for the Local Network Name in the SDLC Attachment description. |
| **Attached Controller** | This value must match the Controller Description (CTLD) value in the APPC Controller description (topic 45). |
| **Local Location Address** | Local Location Address must match the Local LU address parameter in the SDLC Attachment configuration (topic 40).<br><br>Specify **0**. |
| **Mode** | Unless you create your own mode, specify **QSPWTR**. Also, note that the value you specify for Mode must be specified for the following:<br>• The Mode (MODE) parameter in the Printer Device description (topic 49).<br>• The Mode Name parameter in the SDLC Attachment configuration (topic 40). |

## Printer Device Description (CRTDEVPRT)

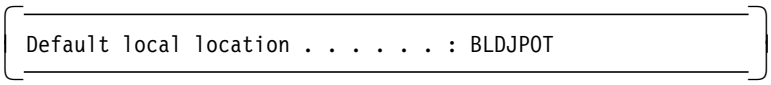
To create the Printer Device description, enter the CRTDEVPRT command from an AS/400 command line. To update an existing description, use the CHGDEVPRT command.

Figure 13 shows a sample Printer Device description for an SDLC attachment. Highlighted values are required or recommended, or they must match another configuration value.

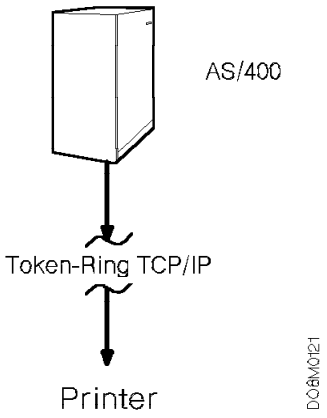
```
Device description . . . . . :  DEVD        PRT3935
Option . . . . . :  OPTION      *BASIC
Category of device . . . . . :              *PRT

Device class . . . . . :  DEVCLS      *RMT
Device type  . . . . . :  TYPE        *IPDS
Device model . . . . . :  MODEL       0
Advanced function printing . . . :  AFP         *YES
AFP attachment . . . . . :  AFPATTACH   *APPC
Online at IPL  . . . . . :  ONLINE      *YES
Font . . . . . :  FONT
  Identifier . . . . . :              011
  Point size . . . . . :              *NONE
Form feed  . . . . . :  FORMFEED    *AUTOCUT
Separator drawer . . . . . :  SEPDRAWER   *FILE
Separator program  . . . . . :  SEPPGM      *NONE
  Library  . . . . . :
Printer error message  . . . . . :  PRTERRMSG   *INQ
Message queue  . . . . . :  MSGQ        QSYSOPR
  Library  . . . . . :                    *LIBL
Maximum pending requests . . . . :  MAXPNDRQS   6
Print while converting . . . . . :  PRTCVT      *YES
Form definition  . . . . . :  FORMDF      F1C10110
  Library  . . . . . :                    *LIBL
Character identifier . . . . . :  CHRID       *SYSVAL
Remote location . . . . . :  RMTLOCNAME  RLN3935
Local location . . . . . :  LCLLOCNAME  BLDJPOT
Remote network identifier  . . . :  RMTNETID    APPN
Mode . . . . . :  MODE        QSPWTR
Text . . . . . :  TEXT        Printer description
```

*Figure 13. Sample Printer Device Description (SDLC)*

| Field | Notes |
|---|---|
| **Advanced Function Printing** | Specify ***YES**. |
| **Form Feed** | Specify ***AUTOCUT**. |
| **Remote Location** | Remote Location must match both of the following:<br>• The Remote Location (RMTLOCNAME) parameter in the APPC Device description (topic 47).<br>• The Local LU Name parameter in the SDLC Attachment configuration (topic 40). |

| Field | Notes |
|---|---|
| **Local Location** | Specify the default local location of the AS/400 that owns the printer. To determine the default local location, enter the command DSPNETA on the AS/400. The response will include a line similar to this:<br>  <br>`Default local location . . . . . : BLDJPOT`<br>where BLDJPOT (or the actual value you see in its place) is the value to specify.<br>Local Location must match:<br>• The Remote LU Name parameter in the SDLC Attachment configuration (topic 40).<br>• The Local Location (LCLLOCNAME) parameter value in the APPC Device description (topic 47).<br>**Note:** You can specify *NETATR to “pick up” the default local location for LCLLOCNAME; however, you must explicitly specify the default local location for the Remote LU Name in the SDLC Attachment configuration. |
| **Remote Network Identifier** | Specify the name of the network in which the printer resides.<br>The value you specify for Remote Network Identifier must be specified for all of the following:<br>• The Local Network Name value in the SDLC Attachment configuration (topic 40).<br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Controller description (topic 45).<br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Device description (topic 47).<br>**Note:** You can specify *NETATR to “pick up” the local network ID for RMTNETID; however, you must explicitly specify the local network ID for the Local Network Name in the SDLC attachment description. |
| **Mode** | Unless you create your own mode, specify **QSPWTR**. Also, note that the value you specify for Mode must be specified for the following:<br>• The Mode (MODE) parameter in the APPC Device description (topic 47).<br>• The Mode Name parameter in the SDLC Attachment configuration (topic 40). |

# Chapter 5. AS/400 TCP/IP Token-Ring Attachment




*AS/400 TCP/IP Token-Ring Attachment*

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and TCP/IP token-ring attachment:

- Complete the attachment worksheet for your printer.
- Create the Token-Ring Line description. See "Token-Ring Line Description (CRTLINTRN)" on page 61.
- Create the TCP/IP Interface description. See "TCP/IP Interface Description (ADDTCPIFC)" on page 64.
- Create the Printer Device description. See "Printer Device Description (CRTDEVPRT)" on page 62.

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

For more information about requirements, refer to:

- "PSF/400 Support" on page 52.
- Chapter 1, "Read This Chapter First" on page 1.
- *Advanced Function Presentation: Printer Information*, G544-3290.
- *AS/400 Advanced Series Printer Device Programming Version 3*, SC41-3713.
- The Introduction and Planning Guide for your printer.

## PSF/400 Support

You must make sure you apply the latest level of service to your host system before you can use TCP/IP or the WRKAFP2 command. WRKAFP2 is a CL command whose source is shipped in a PTF cover letter. WRKAFP2 is a tool and not a supported OS/400 CL command. WRKAFP2 provides an interface to a supported program contained in the same PTF. The PTF cover letter instructs you as to how to get the source code into a physical file member and how to build the command.

The APAR numbers of OS/400 V3R1 and V3R6 that relate to the required TCP/IP support are as follows:

- V3R1
  - WRKAFP2 configuration tool: SA44304
  - PSF/400 TCP/IP support: SA44298
- V3R6
  - WRKAFP2 configuration tool: SA47423
  - PSF/400 TCP/IP support: SA47407

## TCP/IP Token-Ring Attachment Worksheets

**Important**

Note that there are four worksheets:

- One for Release 2 of the 3130 (V3R1 and V3R6)
- One for Release 2 of the 3130 (V3R2)
- One for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130 (V3R1 and V3R6)
- One for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130 (V3R2)

If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

  – If a line contains more than one parameter, the values you specify for those parameters must be the same.

  – The **Acceptable Values** column lists the valid range of values for the attachment parameter.

  – The **Value to Use** column is the only column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

→ The lower part of the worksheet lists AS/400 configuration parameters that do not correspond to token-ring attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the AS/400 environment is set up properly for the token-ring attachment.

  – If a line contains more than one parameter, the values you specify for those parameters must be the same.

  – If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 11. AS/400 (V3R1 and V3R6) TCP/IP Token-Ring Attachment Configuration Worksheet*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | Token-Ring Line Description (see topic 61) | Printer Device Description (see topic 62) | TCP/IP Interface Description (see topic 64) | WRKAFP2 Values (see topic 64) | | |
| Install Status | | | | | Yes or No | **Yes** |
| TCP Port | | | | PORT | 5001 to 65536 | |
| IP Address | | | | RMTSYS | X.X.X.X where X <=255 | |
| Subnet Mask | | | SUBNETMASK | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | | | X.X.X.X where X <=255 | |
| MTU Size | | | | | 60 to 4096 | **4096** |
| Ring Speed (Mbps) | LINESPEED | | | | 4 or 16 | |
| Confine Broadcast | | | | | Yes or No | |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | | | |
| | MAXFRAME | | | | | **4060** |
| | LIND | | LIND | | | |
| | | AFP | | | | ***YES** |
| | | AFPATTACH | | | | ***APPC** |
| | | DEVCLS | | | | ***RMT** |
| | | FORMFEED | | | | ***AUTOCUT** |
| | | MODEL | | | | **0** |
| | | RMTLOCNAME | | | | **DUMMY** |
| | | TYPE | | | | ***IPDS** |
| | | DEVD | | DEVD | | |
| | | | MTU | | | ***LIND** |
| | | | | TCPIP | | ***YES** |
| **Note:** Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9. | | | | | | |

*Table 12 (Page 1 of 2). AS/400 (V3R1 and V3R6) TCP/IP Token-Ring Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | Token-Ring Line Description (see topic 61) | Printer Device Description (see topic 62) | TCP/IP Interface Description (see topic 64) | WRKAFP2 Values (see topic 64) | | |
| **Note:** The menu tree for the following parameters is Attachments -> TCP/IP System | | | | | | |
| Printer Name[2] | | | | | 1-16 characters | |
| Name Server IP Address[2] | | | | | X.X.X.X where X <=255 | |
| Domain Name[2] | | | | | 1-32 characters | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Protocols | | | | | | |
| Enable SNA | | | | | Enable or Disable | |
| Enable TCP/IP | | | | | Enable or Disable | **Enable** |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> Address | | | | | | |
| Alternate Address | | | | | 400000000000 to 7FFFFFFFFFF | |
| MAC Address | | | | | | Display only |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration | | | | | | |
| Auto Start | | | | | Yes or No | |
| Ring Speed (Mbps) | LINESPEED | | | | 4 or 16 | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> TCP/IP | | | | | | |
| IP Address | | | | RMTSYS | X.X.X.X where X <=255 | |
| Subnet Mask | | | SUBNETMASK | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | | | X.X.X.X where X <=255 | |
| MTU Size | | | | | 60 to 4096 | **4096** |
| Confine Broadcast | | | | | Yes or No | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | | |
| Source Attachment | | | | | | **TCP/IP TOKEN RING** |
| IPDS TCP Port Number | | | | PORT | 5001 to 65536 | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | | |
| Enable IPDS | | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | | | |
| | MAXFRAME | | | | | **4060** |
| | LIND | | LIND | | | |
| | | AFP | | | | ***YES** |
| | | AFPATTACH | | | | ***APPC** |
| | | DEVCLS | | | | ***RMT** |

*Table 12 (Page 2 of 2). AS/400 (V3R1 and V3R6) TCP/IP Token-Ring Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | Token-Ring Line Description (see topic 61) | Printer Device Description (see topic 62) | TCP/IP Interface Description (see topic 64) | WRKAFP2 Values (see topic 64) | | |
| | | FORMFEED | | | | ***AUTOCUT** |
| | | MODEL | | | | **0** |
| | | RMTLOCNAME | | | | **DUMMY** |
| | | TYPE | | | | ***IPDS** |
| | | DEVD | | DEVD | | |
| | | | MTU | | | ***LIND** |
| | | | | TCPIP | | ***YES** |

**Notes:**

1. Names can be one to eight characters. 0-9, A-Z, $, #, and @ are permitted, but the first character cannot be 0-9.
2. Printer Name, Name Server IP Address, and Domain Name apply only when you use FTP, TFTP, or LPR to send ASCII jobs to the printer.

*Table 13. AS/400 (V3R2) TCP/IP Token-Ring Attachment Configuration Worksheet*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | Token-Ring Line Description (see topic 61) | Printer Device Description (see topic 62) | TCP/IP Interface Description (see topic 64) | PSF Configuration Object | | |
| Install Status | | | | | Yes or No | **Yes** |
| TCP Port | | | | PORT | 5001 to 65536 | |
| IP Address | | | | RMTLOC NAME | X.X.X.X where X <=255 | |
| Subnet Mask | | | SUBNETMASK | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | | | X.X.X.X where X <=255 | |
| MTU Size | | | | | 60 to 4096 | **4096** |
| Ring Speed (Mbps) | LINESPEED | | | | 4 or 16 | |
| Confine Broadcast | | | | | Yes or No | |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | | | |
| | MAXFRAME | | | | | **4060** |
| | LIND | | LIND | | | |
| | | AFP | | | | ***YES** |
| | | AFPATTACH | | | | ***APPC** |
| | | DEVCLS | | | | ***RMT** |
| | | FORMFEED | | | | ***AUTOCUT** |
| | | MODEL | | | | **0** |
| | | RMTLOCNAME | | | | **DUMMY** |
| | | TYPE | | | | ***IPDS** |
| | | DEVD | | PSFCFG* | | |
| | | | MTU | | | ***LIND** |
| **Note:** Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9. | | | | | | |
| **Note:** *PSFCFG must be created into the library QGPL. | | | | | | |

*Table 14 (Page 1 of 2). AS/400 (V3R2) TCP/IP Token-Ring Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | Token-Ring Line Description (see topic 61) | Printer Device Description (see topic 62) | TCP/IP Interface Description (see topic 64) | PSF CONFIGURATION OBJECT | | |
| **Note:** The menu tree for the following parameters is Attachments -> TCP/IP System | | | | | | |
| Printer Name[2] | | | | | 1-16 characters | |
| Name Server IP Address[2] | | | | | X.X.X.X where X <=255 | |
| Domain Name[2] | | | | | 1-32 characters | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Protocols | | | | | | |
| Enable SNA | | | | | Enable or Disable | |
| Enable TCP/IP | | | | | Enable or Disable | **Enable** |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> Address | | | | | | |
| Alternate Address | | | | | 400000000000 to 7FFFFFFFFFFF | |
| MAC Address | | | | | | Display only |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration | | | | | | |
| Auto Start | | | | | Yes or No | |
| Ring Speed (Mbps) | LINESPEED | | | | 4 or 16 | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> TCP/IP | | | | | | |
| IP Address | | | | RMTLOCNAME | X.X.X.X where X <=255 | |
| Subnet Mask | | | SUBNETMASK | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | | | X.X.X.X where X <=255 | |
| MTU Size | | | | | 60 to 4096 | **4096** |
| Confine Broadcast | | | | | Yes or No | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | | |
| Source Attachment | | | | | | **TCP/IP TOKEN RING** |
| IPDS TCP Port Number | | | | PORT | 5001 to 65536 | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | | |
| Enable IPDS | | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | | | |
| | MAXFRAME | | | | | **4060** |
| | LIND | | LIND | | | |
| | | AFP | | | | ***YES** |
| | | AFPATTACH | | | | ***APPC** |
| | | DEVCLS | | | | ***RMT** |

*Table 14 (Page 2 of 2). AS/400 (V3R2) TCP/IP Token-Ring Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | Token-Ring Line Description (see topic 61) | Printer Device Description (see topic 62) | TCP/IP Interface Description (see topic 64) | PSF CONFIGURATION OBJECT | | |
| | | FORMFEED | | | | *AUTOCUT |
| | | MODEL | | | | 0 |
| | | RMTLOCNAME | | | | DUMMY |
| | | TYPE | | | | *IPDS |
| | | DEVD | | PSFCFG | | |
| | | | MTU | | | *LIND |

**Notes:**

1. Names can be one to eight characters. 0-9, A-Z, $, #, and @ are permitted, but the first character cannot be 0-9.
2. Printer Name, Name Server IP Address, and Domain Name apply only when you use FTP, TFTP, or LPR to send ASCII jobs to the printer.

## TCP/IP Token-Ring Attachment Configuration

Figure 14 shows a sample token-ring attachment configuration. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 60 for a description of parameters unique to the 3130 Release 2.

```
Installed:                    Yes
TCP Port:                     5001
IP address:                   9.99.25.128
Subnet mask:                  255.255.255.0
Default gateway address:      9.99.25.1
MTU size:                     4096
Ring speed:                   4
Confine broadcast:            No
```

*Figure 14. Sample AS/400 TCP/IP Token-Ring Attachment Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Installed** | Specify **Yes**. |
| **TCP port** | The TCP socket address of the attachment. This value must match the PORT value you specify using WRKAFP2. A TCP port value of **5001** is recommended. |
| **IP address** | The Internet Protocol address of the printer in dotted decimal format.<br>You are assigned this value from your LAN administrator. It must be unique, and it must match the RMTSYS value you specify using WRKAFP2. |
| **Subnet mask** | The mask identifying the local subnet in dotted decimal format. This value should match the SUBNETMASK value in the token-ring interface description (see topic 64).<br>You may get this value from your LAN administrator. |
| **Default gateway address** | The IP address of the default gateway in dotted decimal format. You may get this value from your LAN administrator. |
| **MTU size** | MTU (Maximum Transmission Unit) is the maximum allowable length of IP packets. The recommended sizes is **4096**. This value should match the MTU size of other devices on the ring.<br>You may get this value from your LAN administrator. |
| **Ring speed** | The ring speed of the network the adapter attaches to. This value must match the speed of the network; an incorrect value can cause the network to stop operating. The value you specify for Ring Speed must also match the Line Speed (LINESPEED) parameter in the Token-Ring Line description (topic 61).<br>You may get this value from your LAN administrator. |
| **Confine broadcast** | A yes or no indication of whether broadcast packets—notably ARP (Address Resolution Protocol) packets—are enabled to cross bridges to other rings.<br>**Note:** Be sure to specify NO to allow ARP packets to cross bridges. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Default gateway address** | The IP address of the default gateway in dotted decimal format. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Printer name** | The name that identifies the printer in messages or mail generated for ASCII jobs, or when a user establishes an FTP session with the printer. The name can be up to 16 alphanumeric characters. The Printer Name cannot be blank; if you do not need a name or if the printer is for IPDS jobs only, use the default value.<br><br>This is also known as the **HOST NAME** or **SERVER NAME** in most TCP/IP environments.<br><br>The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Name server IP address** | The IP address of the name server in dotted decimal format. The name server allows the printer to recognize systems by name, rather than just by IP address. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Domain name** | The name of the domain the printer is in, up to 32 alphanumeric characters. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Enable SNA** | Specifies whether the token ring is enabled or disabled for SNA. The default is **Enabled**. |
| **Enable TCP/IP** | Specifies whether the token ring is enabled or disabled for TCP/IP. Specify **Enabled** (the default value). |
| **Alternate address** | The LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. You can use the MAC address as the alternate address for your printer. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **TCP/IP Token Ring**. |
| **IPDS TCP Port number** | The TCP socket address of the attachment.<br><br>**Note:** This parameter is not unique, but it has been renamed and moved to a different menu tree. |
| **Enable IPDS** | Specify **ENABLED.**<br><br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |

## Token-Ring Line Description (CRTLINTRN)

To create the token-ring line description, enter the CRTLINTRN command from an AS/400 command line. To update an existing description, use the CHGLINTRN command.

Figure 15 shows a sample token-ring line description for a token-ring attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
Line description . . . . . :   LIND        LINETRN
Option . . . . . :   OPTION      *ALL
Category of line . . . . . :                *TRLAN
Resource name  . . . . . :   RSRCNAME    LIN021
Online at IPL  . . . . . :   ONLINE      *YES
Vary on wait . . . . . :   VRYWAIT     *NOWAIT
Network controller . . . . . :   NETCTL      TRLANNET
Maximum controllers  . . . . . :   MAXCTL      40
Line speed . . . . . :   LINESPEED   4M
Maximum frame size . . . . . :   MAXFRAME    4060
TRLAN manager logging level  . . . :   TRNLOGLVL   *OFF
  Current logging level  . . . . . :                  *OFF
TRLAN manager mode . . . . . :   TRNMGRMODE  *OBSERVING
Log configuration changes  . . . . :   LOGCFGCHG   *LOG
Token-ring inform of beacon  . . . :   TRNINFBCN   *YES
Local adapter address  . . . . . :   ADPTADR     400044445555
Exchange identifier  . . . . . :   EXCHID      056E00E6
Error threshold level  . . . . . :   THRESHOLD   *OFF
Text . . . . . :   TEXT        Token-ring line description
SSAP list  . . . . . :   SSAP        *SYSGEN
----Source Service Access Points-----    ----Source Service Access Points-----
   SSAP      Maximum Frame    Type          SSAP      Maximum Frame    Type
    04         *MAXFRAME      *SNA           AA         *MAXFRAME      *NONSNA
    12         *MAXFRAME      *NONSNA        C8         *MAXFRAME      *HPR
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
Autocreate controller  . . . . . :   AUTOCRTCTL  *NO
Recovery limits  . . . . . :   CMNRCYLMT
  Count limit  . . . . . :                2
  Time interval  . . . . . :                5
Functional address . . . . . :   FCNADR
 --------------------Functional Addresses----------------------
   (No functional addresses found)
```

*Figure 15. Sample Token-Ring Line Description (TCP/IP)*

| Field | Notes |
|---|---|
| **Line Description** | This value must match the Line Description (LIND) value in the TCP/IP interface description (topic 64). |
| **Line Speed** | This value must match the value on the Ring Speed parameter in the Token-Ring Attachment configuration (topic 59). Specify **4** if the speed is 4 Mbps; specify **16** if the speed is 16 Mbps. |
| **Maximum Frame Size** | Specify **4060** to permit the printer to use its maximum value of 3840. If you specify a value less than 4060, the printer adjusts its frame size accordingly. If you need to set Maximum Frame Size to a higher value in order to accommodate other controllers using this line, you can do so. |

## Printer Device Description (CRTDEVPRT)

To create the Printer Device description, enter the CRTDEVPRT command from an AS/400 command line. To update an existing description, use the CHGDEVPRT command.

Figure 16 shows a sample Printer Device description for a token-ring TCP/IP attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
Device description . . . . . :   DEVD         PRT3935
Option . . . . . :   OPTION       *ALL
Category of device . . . . . :                *PRT
Automatically created  . . . . . :            NO
Device class . . . . . :   DEVCLS       *RMT
Device type  . . . . . :   TYPE         *IPDS
Device model . . . . . :   MODEL        0
Advanced function printing . . . . :   AFP          *YES
AFP attachment . . . . . :   AFPATTACH   *APPC
Online at IPL  . . . . . :   ONLINE       *YES
Font . . . . . :   FONT
  Identifier . . . . . :                      011
  Point size . . . . . :                      *NONE
Form feed  . . . . . :   FORMFEED     *AUTOCUT
Separator drawer . . . . . :   SEPDRAWER   *FILE
Separator program  . . . . . :   SEPPGM      *NONE
  Library  . . . . . :
Printer error message  . . . . . :   PRTERRMSG   *INQ
Message queue  . . . . . :   MSGQ         QSYSOPR
  Library  . . . . . :                        *LIBL
Maximum pending requests . . . . . :   MAXPNDRQS   6
Print while converting . . . . . :   PRTCVT      *YES
Form definition  . . . . . :   FORMDF       F1C10110
  Library  . . . . . :                        *LIBL
Character identifier . . . . . :   CHRID        *SYSVAL
Remote location  . . . . . :   RMTLOCNAME   DUMMY
Local location . . . . . :   LCLLOCNAME   *NETATR
Remote network identifier  . . . . :   RMTNETID     *NETATR
Mode . . . . . :   MODE         QSPWTR
Text . . . . . :   TEXT         Printer description
```

*Figure 16. Sample Printer Device Description (Token-Ring TCP/IP)*

| Field | Notes |
|---|---|
| **Device Description** | This value must match the DEVD value you specify with WRKCFG2. |
| **Device Class** | Specify ***RMT**. |
| **Device Type** | Specify ***IPDS**. |
| **Device Model** | Specify **0**. |
| **Advanced Function Printing** | Specify ***YES**. |
| **AFP Attachment** | Specify ***APPC**. |
| **Form Feed** | Specify ***AUTOCUT**. |
| **Remote Location** | Specify any name that is not used in the SNA network. In a TCP/IP network, this value is ignored. |
| **Local Location** | Use the default value, ***NETATR**. In a TCP/IP network, this value is ignored. |

| Field | Notes |
|---|---|
| **Remote Network Identifier** | Use the default value, ***NETATR**. In a TCP/IP network, this value is ignored. |
| **Mode** | Use the default value, **QSPWTR**. In a TCP/IP network, this value is ignored. |

## TCP/IP Interface Description (ADDTCPIFC)

To create the TCP/IP Interface description, enter the ADDTCPIFC command from an AS/400 command line.

Figure 17 shows a sample TCP/IP Interface description for a token-ring TCP/IP attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
Internet address . . . . . . . . INTNETADR    > 9.99.25.150
Line description . . . . . . . . LIND           LINETRN
Subnet mask  . . . . . . . . . . SUBNETMASK     255.255.255.0
Type of service  . . . . . . . . TOS            *NORMAL
Maximum transmission unit  . . . MTU            *LIND
Autostart  . . . . . . . . . . . AUTOSTART      *YES
PVC logical channel identifier   PVCLGLCHLI
                          + for more values
X.25 idle circuit timeout  . . . IDLVCTTIMO     60
X.25 maximum virtual circuits  . MAXSVC         64
X.25 DDN interface . . . . . . . DDN            *NO
TRLAN bit sequencing . . . . . . BITSEQ         *MSB
```

*Figure 17. Sample TCP/IP Interface Description (Token-Ring TCP/IP)*

| Field | Notes |
|---|---|
| **Line description** | This value must match the Line Description (LIND) value you specify in the Token-Ring Line Description (topic 61). |
| **Subnet mask** | This value must match the value on the Subnet Mask parameter in the Token-Ring Attachment configuration (topic 59). |
| **Maximum transmission unit** | Specify ***LIND**, the default value. |

## Defining TCP/IP Configuration Values (V3R1 and V3R6)

To define TCP/IP configuration values, enter the WRKAFP2 command from an AS/400 command line. Figure 18 shows an example:

**Note:** For OS/400 Version 3 Release 1, specify the INACTTMR parameter. For OS/400 Version 3 Release 6, specify the RLSTMR parameter.

```
WRKAFP2 DEVD(PRT3935)
        TCPIP(*YES)
        RMTSYS('9.99.25.128')
        PORT(5001)
        ACTTMR(170)
        INACTTMR(*NOMAX)
        -or-
        RLSTMR(*NOMAX)
```

*Figure 18. WRKAFP2 Command Example*

| Field | Notes |
|---|---|
| **DEVD** | This value must match the Device Description (DEVD) value in the Printer Device description (topic 57). |
| **TCPIP** | Specify ***YES**. |
| **RMTSYS** | The IP address. The IP address you specify must match the IP Address parameter in the Token-Ring Attachment configuration (topic 54). |
| **PORT** | The port number you specify must match the PORT parameter in the Token-Ring Attachment configuration (topic 54). A TCP port value of **5001** is recommended. |
| **ACTTMR** | The number of seconds PSF/400 will wait for the printer to respond to an activation request. (An activation request occurs when PSF attempts to make a connection with the printer.) If the printer does not respond within this time, PSF/400 terminates.<br>If you want multiple AS/400s to share a printer, set this value to *NOMAX. ACTTMR(*NOMAX) means that PSF/400 will wait indefinitely to establish a connection with a printer, which may be busy because another PSF system is using it. |
| **INACTTMR**<br>**RLSTMR** | This value specifies how long PSF/400 will maintain a session with the printer while there are no spooled files with a status of RDY. A value of *NOMAX means PSF/400 will not release the connection to the printer until you enter ENDWTR. If you wish to have PSF/400 share this printer with another PSF system, use a value that is appropriate for your environment.<br>**Note:** For OS/400 Version 3 Release 1, specify the INACTTMR parameter. For OS/400 Version 3 Release 6, specify the RLSTMR parameter. |

## Defining TCP/IP Configuration Values (V3R2)

To define TCP/IP configuration values, enter the CRTPSFCFG command from an AS/400 command line. Figure 19 shows an example:

**Note:** For OS/400 Version 3 Release 1, specify the INACTTMR parameter. For OS/400 Version 3 Release 6, specify the RLSTMR parameter.

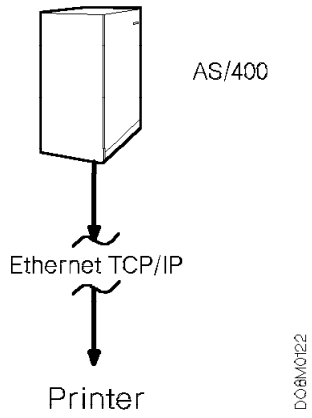
```
 PSF Configuration . . . . . .  PSFCFG       > PRT3935
   Library . . . . . .                         QGPL
User resource library list  .  USRRSCLIBL     *JOBLIBL
Device resource library list   DEVRSCLIBL
                        + for more values
IPDS pass through . . . . . .  IPDSPASTHR     *NO
Activate release timer  . . .  ACTRLSTMR      *NORDYF
Release timer . . . . . .  .   RLSTMR         *NOMAX
Restart timer . . . . . .  .   RESTRTMR       *IMMED
SNA retry count . . . . . .    RETRY          2
Delay time between SNA retries RETRYDLY       0
Text 'description'  . . . . .  TEXT           TCP/IP attached printer
Blank page    . . . . . .  .   BLANKPAGE      *YES
Page size control . . . . . .  PAGSIZCTL      *NO
Resident fonts  . . . . . .    RESFONT        *YES
Resource retention  . . . . .  RSCRET         *YES
Edge orient   . . . . . .  .   EDGEORIENT     *NO
Remote location:  . . . . . .  RMTLOCNAME
  Name or address . . . . . .                > '9.99.25.128'
TCP/IP port   . . . . . .  .   PORT           >5001
TCP/IP activation timer . . .  ACTTMR         170
PSF defined option  . . . . .  PSFDFNOPT      *NONE
                     + for more values
Replace   . . . . . .  . . .   REPLACE        *YES
Authority   . . . . . .  . .   AUT            *LIBCRTAUT
```

*Figure 19. CRTPSFCFG Command Example*

| Field | Notes |
|---|---|
| **ACTRLSTMR** | This parameter specifies the point at which the Release Timer (RLSTMR) is activated. Valid values are *NORDYF, *IMMED, *PRTNORDYF, AND *PRTIMMED. See *AS/400 Advanced Series Printer Device Programming Version 3*, SC41-3713, for additional information. |
| **PSFCFG** | This value must match the Device Description (DEVD) value in the Printer Device description (topic 57). The PSF configuration object must be created in library QGPL. |
| **RMTLOCNAME** | The IP address or host name. The IP address or IP address represnted by the host name that you specify must match the IP Address parameter in the Token-Ring Attachment configuration (topic 54). |
| **PORT** | The port number you specify must match the PORT parameter in the Token-Ring Attachment configuration (topic 54). A TCP port value of **5001** is recommended. |
| **ACTTMR** | The number of seconds PSF/400 will wait for the printer to respond to an activation request. (An activation request occurs when PSF attempts to make a connection with the printer.) If the printer does not respond within this time, PSF/400 terminates.<br><br>If you want multiple AS/400s to share a printer, set this value to *NOMAX. ACTTMR(*NOMAX) means that PSF/400 will wait indefinitely to establish a connection with a printer, which may be busy because another PSF system is using it. |

| Field | Notes |
|---|---|
| **RLSTMR** | This is a timer whose value is referenced by the ACTRLSTMR parameter. A value of *NOMAX means PSF/400 will not release the connection or IPDS dialog until you enter ENDWTR, regardless of the value specified for ACTRLSTMR.<br><br>**Note:** For OS/400 Version 3 Release 1, this parameter was called INACTTMR. The PSF configuration commands for OS/400 Version 3 Release 2 offer increased functionality for RLSTMR. |

# Chapter 6. AS/400 TCP/IP Ethernet Attachment




*AS/400 TCP/IP Ethernet Attachment*

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and TCP/IP Ethernet attachment:

- Complete the attachment worksheet for your printer.
- Create the Ethernet Line description. See “Ethernet Line Description (CRTLINTRN)” on page 79.
- Create the Ethernet Interface description. See “Ethernet Interface Description (ADDTCPIFC)” on page 82.
- Create the Printer Device description. See “Printer Device Description (CRTDEVPRT)” on page 80.

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

For more information about requirements, refer to:

- “PSF/400 Support” on page 52.
- Chapter 1, “Read This Chapter First” on page 1.
- *Advanced Function Presentation: Printer Information*, G544-3290.
- *AS/400 Advanced Series Printer Device Programming Version 3*, SC41-3713.
- The Introduction and Planning Guide for your printer.

## TCP/IP Ethernet Attachment Worksheets

**Important**

Note that there are four worksheets:

- One for Release 2 of the 3130 (V3R1 and V3R6)
- One for Release 2 of the 3130 (V3R2)
- One for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130 (V3R1 and V3R6)
- One for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130 (V3R2)

If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

  – If a line contains more than one parameter, the values you specify for those parameters must be the same.

  – The **Acceptable Values** column lists the valid range of values for the attachment parameter.

  – The **Value to Use** column is the only column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

→ The lower part of the worksheet lists AS/400 configuration parameters that do not correspond to token-ring attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the AS/400 environment is set up properly for the token-ring attachment.

  – If a line contains more than one parameter, the values you specify for those parameters must be the same.

  – If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 15. AS/400 (V3R1 and V3R6) TCP/IP Ethernet Attachment Configuration Worksheet*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | Ethernet Line Description (see topic 79) | Printer Device Description (see topic 80) | Ethernet Interface Description (see topic 82) | WRKAFP2 Values (see topic 81) | | |
| Install Status | | | | | Yes or No | **Yes** |
| TCP Port | | | | PORT | 5001 to 65536 | |
| IP Address | | | | RMTSYS | X.X.X.X where X <=255 | |
| Subnet Mask | | | SUBNETMASK | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | | | X.X.X.X where X <=255 | |
| Standard MTU Size | | | | | 60 to 1500 (bytes) | |
| IEEE802.3 MTU Size | | | | | 60 to 1492 (bytes) | |
| Ethernet Type | | | | | Standard or IEEE802.3 | |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | | | |
| | LIND | | LIND | | | |
| | | AFP | | | | ***YES** |
| | | AFPATTACH | | | | ***APPC** |
| | | DEVCLS | | | | ***RMT** |
| | | FORMFEED | | | | ***AUTOCUT** |
| | | MODEL | | | | **0** |
| | | RMTLOCNAME | | | | **DUMMY** |
| | | TYPE | | | | ***IPDS** |
| | | DEVD | | DEVD | | |
| | | | MTU | | | ***LIND** |
| | | | | TCPIP | | ***YES** |
| **Note:** Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9. | | | | | | |

*Table 16 (Page 1 of 2). AS/400 (V3R1 and V3R6) TCP/IP Ethernet Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | Ethernet Line Description (see topic 79) | Printer Device Description (see topic 80) | Ethernet Interface Description (see topic 82) | WRKAFP2 Values (see topic 81) | | |
| **Note:** The menu tree for the following parameters is Attachments -> TCP/IP System | | | | | | |
| Printer Name[2] | | | | | | |
| Name Server IP Address[2] | | | | | X.X.X.X where X <=255 | |
| Domain Name[2] | | | | | | |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration -> Address | | | | | | |
| Alternate Address | | | | | 400000000000 to 7FFFFFFFFFFF | |
| MAC Address | | | | | | Display only |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration | | | | | | |
| Auto Start | | | | | Yes or No | |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration -> TCP/IP | | | | | | |
| IP Address | | | | RMTSYS | X.X.X.X where X <=255 | |
| Subnet Mask | | | SUBNETMASK | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | | | X.X.X.X where X <=255 | |
| Ethernet Type | | | | | Standard or IEEE802.3 | |
| MTU Size | | | | | 60 to 1500 | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | | |
| Source Attachment | | | | | | **TCP/IP Ethernet** |
| IPDS TCP Port Number | | | | PORT | 5001 to 65536 | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | | |
| Enable IPDS | | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | | | |
| | LIND | | LIND | | | |
| | | AFP | | | | ***YES** |
| | | AFPATTACH | | | | ***APPC** |
| | | DEVCLS | | | | ***RMT** |
| | | FORMFEED | | | | ***AUTOCUT** |
| | | MODEL | | | | **0** |
| | | RMTLOCNAME | | | | **DUMMY** |
| | | TYPE | | | | ***IPDS** |
| | | DEVD | | DEVD | | |

*Table 16 (Page 2 of 2). AS/400 (V3R1 and V3R6) TCP/IP Ethernet Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | Ethernet Line Description (see topic 79) | Printer Device Description (see topic 80) | Ethernet Interface Description (see topic 82) | WRKAFP2 Values (see topic 81) | | |
| | | | MTU | | | ***LIND** |
| | | | | TCPIP | | ***YES** |

**Notes:**

1. Names can be one to eight characters. 0-9, A-Z, $, #, and @ are permitted, but the first character cannot be 0-9.
2. Printer Name, Name Server IP Address, and Domain Name apply only when you use FTP, TFTP, or LPR to send ASCII jobs to the printer.

*Table 17. AS/400 (V3R2) TCP/IP Ethernet Attachment Configuration Worksheet*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | Ethernet Line Description (see topic 56) | Printer Device Description (see topic 69) | Ethernet Interface Description (see topic 71) | PSF Configuration Object | | |
| Install Status | | | | | Yes or No | **Yes** |
| TCP Port | | | | PORT | 5001 to 65536 | |
| IP Address | | | | RMTLOCNAME | X.X.X.X where X <=255 | |
| Subnet Mask | | | SUBNETMASK | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | | | X.X.X.X where X <=255 | |
| Standard MTU Size | | | | | 60 to 1500 (bytes) | |
| IEEE802.3 MTU Size | | | | | 60 to 1492 (bytes) | |
| Ethernet Type | | | | | Standard or IEEE802.3 | |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | | | |
| | LIND | | LIND | | | |
| | | AFP | | | | ***YES** |
| | | AFPATTACH | | | | ***APPC** |
| | | DEVCLS | | | | ***RMT** |
| | | FORMFEED | | | | ***AUTOCUT** |
| | | MODEL | | | | **0** |
| | | RMTLOCNAME | | | | **DUMMY** |
| | | TYPE | | | | ***IPDS** |
| | | DEVD | | PSFCFG* | | |
| | | | MTU | | | ***LIND** |
| **Note:** Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9. | | | | | | |
| **Note:** : *PSFCFG must be created into the library QGPL. | | | | | | |

*Table 18 (Page 1 of 2). AS/400 (V3R2) ICP/IP Ethernet Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | **Ethernet Line Description (see topic 68)** | **Printer Device Description (see topic 69)** | **Ethernet Interface Description (see topic 71)** | **PSF Configuration Object.** | | |
| **Note:** The menu tree for the following parameters is Attachments -> TCP/IP System | | | | | | |
| Printer Name[2] | | | | | | |
| Name Server IP Address[2] | | | | | X.X.X.X where X <=255 | |
| Domain Name[2] | | | | | | |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration -> Address | | | | | | |
| Alternate Address | | | | | 400000000000 to 7FFFFFFFFFFF | |
| MAC Address | | | | | | Display only |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration | | | | | | |
| Auto Start | | | | | Yes or No | |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration -> TCP/IP | | | | | | |
| IP Address | | | | RMTLOCNAME | X.X.X.X where X <=255 | |
| Subnet Mask | | | SUBNETMASK | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | | | X.X.X.X where X <=255 | |
| Ethernet Type | | | | | Standard or IEEE802.3 | |
| MTU Size | | | | | 60 to 1500 | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | | |
| Source Attachment | | | | | | **TCP/IP Ethernet** |
| IPDS TCP Port Number | | | | PORT | 5001 to 65536 | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | | |
| Enable IPDS | | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | | | |
| | LIND | | LIND | | | |
| | | AFP | | | | ***YES** |
| | | AFPATTACH | | | | ***APPC** |
| | | DEVCLS | | | | ***RMT** |
| | | FORMFEED | | | | ***AUTOCUT** |
| | | MODEL | | | | **0** |
| | | RMTLOCNAME | | | | **DUMMY** |
| | | TYPE | | | | ***IPDS** |
| | | DEVD | | PSFCFG* | | |

*Table 18 (Page 2 of 2). AS/400 (V3R2) ICP/IP Ethernet Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | AS/400 Parameters | | | | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | Ethernet Line Description (see topic 68) | Printer Device Description (see topic 69) | Ethernet Interface Description (see topic 71) | PSF Configuration Object. | | |
| | | | MTU | | | ***LIND** |

**Notes:**

1. Names can be one to eight characters. 0-9, A-Z, $, #, and @ are permitted, but the first character cannot be 0-9.
2. Printer Name, Name Server IP Address, and Domain Name apply only when you use FTP, TFTP, or LPR to send ASCII jobs to the printer.

**Note:** *PSFCFG must be created into library QGPL.

## TCP/IP Ethernet Configuration

Figure 20 on page 77 shows a sample configuration for an Ethernet TCP/IP configuration. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 78 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
TCP Port:                   5001
IP address:                 9.99.5.240
Subnet mask:                255.255.255.128
Default gateway address:    9.99.25.1
Standard MTU size:          1500
IEEE8023 MTU size:          1492
Ethernet type:              Standard
```

*Figure 20. Sample AS/400 TCP/IP Ethernet Attachment Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Installed** | Specify **Yes**. |
| **TCP port** | The TCP socket address of the attachment. This value must match the PORT value you specify using WRKAFP2. A TCP port value of **5001** is recommended. |
| **IP address** | The Internet Protocol address of the printer in dotted decimal format.<br>You are assigned this value by your LAN administrator. It must be unique, and it must match the RMTSYS value you specify using WRKAFP2. |
| **Subnet mask** | The mask identifying the local subnet in dotted decimal format. This value should match the SUBNETMASK value in the Ethernet interface description (see topic 82).<br>You may get this value from your LAN administrator. If you do not use a subnet mask, leave the field blank or set it to match the IP address. |
| **Default gateway address** | The IP address of the default gateway in dotted decimal format.<br>You may get this value from your LAN administrator. If you do not use a default gateway address, leave the field blank or set it to match the IP address. |
| **Standard MTU size** | The maximum transmission unit size for Standard Ethernet type. The range is 60 at 1500 bytes. The recommended size is **1500**. The MTU size must match the MTU size specified by the host system that is sending jobs to the printer.<br>You may get this value from your LAN administrator. |
| **IEEE802.3 MTU size** | The maximum transmission unit size for IEEE802.3 Ethernet type. The range is 60 at 1492 bytes. The recommended size is **1492**. The MTU size must match the MTU size specified by the host system that is sending jobs to the printer.<br>You may get this value from your LAN administrator. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Ethernet type** | The Ethernet type, either IEEE802.3 or Standard. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Default gateway address** | The IP address of the default gateway in dotted decimal format. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Printer name** | The name that identifies the printer in messages or mail generated for ASCII jobs, or when a user establishes an FTP session with the printer. The name can be up to 16 alphanumeric characters. The Printer Name cannot be blank; if you do not need a name or if the printer is for IPDS jobs only, use the default value.<br>The value you specify will apply to all TCP/IP attachments your printer uses.<br>This is also known as the **HOST NAME** or **SERVER NAME** in most TCP/IP environments. |
| **Name server IP address** | The IP address of the name server in dotted decimal format. The name server allows the printer to recognize systems by name, rather than just by IP address. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Domain name** | The name of the domain the printer is in, up to 32 alphanumeric characters. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Alternate address** | The LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **TCP/IP Ethernet**. |
| **IPDS TCP Port number** | The TCP socket address of the attachment.<br>**Note:** This parameter is not unique, but it has been renamed and moved to a different menu tree. |
| **Enable IPDS** | Specify **ENABLED.**<br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |

## Ethernet Line Description (CRTLINTRN)

To create the Ethernet line description, enter the CRTLINETH command from an AS/400 command line. To update an existing description, use the CHGLINETH command.

Figure 21 shows a sample Ethernet line description. Highlighted values are required or recommended, or they must match another configuration value.

```
Line description . . . . . :   LIND        LINEETH
Option . . . . . :   OPTION      *ALL
Category of line . . . . . :                *ELAN
Resource name  . . . . . :   RSRCNAME    LIN021
Online at IPL  . . . . . :   ONLINE      *YES
Vary on wait . . . . . :   VRYWAIT     *NOWAIT
Network controller . . . . . :   NETCTL      ETHERNET
Local adapter address  . . . . . :   ADPTADR     420044445555
Exchange identifier  . . . . . :   EXCHID      056A3338
Ethernet standard  . . . . . :   ETHSTD      *ALL
Maximum controllers  . . . . . :   MAXCTL      40
Error threshold level  . . . . . :   THRESHOLD   *OFF
Text . . . . . :   TEXT        Ethernet line description
SSAP list  . . . . . :   SSAP
----Source Service Access Points-----    ----Source Service Access Points-----
   SSAP      Maximum Frame    Type          SSAP      Maximum Frame    Type
    04           1496         *SNA           AA             1496        *NONSNA
    12           1496         *NONSNA        C8             1496        *HPR

Group address  . . . . . :   GRPADR
-----------Group Addresses-----------  ----

       (No group addresses found)

Link speed . . . . . :   LINKSPEED   10M
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
Autocreate controller  . . . . . :   AUTOCRTCTL  *NO
Recovery limits  . . . . . :   CMNRCYLMT
  Count limit  . . . . . :                2
  Time interval  . . . . . :                5
```

*Figure 21. Sample Ethernet Line Description*

| Field | Notes |
|---|---|
| **Line Description** | This value must match the Line Description (LIND) value in the Ethernet interface description (topic 82). |

## Printer Device Description (CRTDEVPRT)

To create the Printer Device description, enter the CRTDEVPRT command from an AS/400 command line. To update an existing description, use the CHGDEVPRT command.

Figure 22 shows a sample Printer Device description for an Ethernet attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
Device description . . . . . :   DEVD         PRT3935
Option . . . . . :   OPTION       *ALL
Category of device . . . . . :                *PRT
Automatically created  . . . . . :            NO
Device class . . . . . :   DEVCLS       *RMT
Device type  . . . . . :   TYPE         *IPDS
Device model . . . . . :   MODEL        0
Advanced function printing . . . . :   AFP          *YES
AFP attachment . . . . . :   AFPATTACH   *APPC
Online at IPL  . . . . . :   ONLINE       *YES
Font . . . . . :   FONT
  Identifier . . . . . :                      011
  Point size . . . . . :                      *NONE
Form feed  . . . . . :   FORMFEED     *AUTOCUT
Separator drawer . . . . . :   SEPDRAWER   *FILE
Separator program  . . . . . :   SEPPGM      *NONE
  Library  . . . . . :
Printer error message  . . . . . :   PRTERRMSG   *INQ
Message queue  . . . . . :   MSGQ         QSYSOPR
  Library  . . . . . :                        *LIBL
Maximum pending requests . . . . . :   MAXPNDRQS   6
Print while converting . . . . . :   PRTCVT      *YES
Print request timer  . . . . . :   PRTRQSTMR   *NOMAX
Form definition  . . . . . :   FORMDF       F1C10110
  Library  . . . . . :                        *LIBL
Character identifier . . . . . :   CHRID        *SYSVAL
Remote location  . . . . . :   RMTLOCNAME   DUMMY
Local location . . . . . :   LCLLOCNAME   *NETATR
Remote network identifier  . . . . :   RMTNETID    *NETATR
Mode . . . . . :   MODE         QSPWTR
Text . . . . . :   TEXT         Printer description
```

*Figure 22. Sample Printer Device Description (Ethernet TCP/IP)*

| Field | Notes |
|---|---|
| **Device Description** | This value must match the DEVD value you specify with WRKCFG2 (see topic “Defining TCP/IP Configuration Values (V3R1 and V3R6)” on page 83). |
| **Device Class** | Specify ***RMT**. |
| **Device Type** | Specify ***IPDS**. |
| **Device Model** | Specify **0**. |
| **Advanced Function Printing** | Specify ***YES**. |
| **AFP Attachment** | Specify ***APPC**. |
| **Form Feed** | Specify ***AUTOCUT**. |
| **Remote Location** | Specify any name that is not used in the SNA network. In a TCP/IP network, this value is ignored. |

| Field | Notes |
|---|---|
| **Local Location** | Use the default value, ***NETATR**. In a TCP/IP network, this value is ignored. |
| **Remote Network Identifier** | Use the default value, ***NETATR**. In a TCP/IP network, this value is ignored. |
| **Mode** | Use the default value, **QSPWTR**. In a TCP/IP network, this value is ignored. |

## Ethernet Interface Description (ADDTCPIFC)

To create the Ethernet Interface description, enter the ADDTCPIFC command from an AS/400 command line.

Figure 23 shows a sample Ethernet Interface description. Highlighted values are required or recommended, or they must match another configuration value.

```
Internet address . . . . . . . . . INTNETADR    > 9.99.5.250
Line description . . . . . . . . . LIND           LINEETH
Subnet mask  . . . . . . . . . . . SUBNETMASK     255.255.255.128
Type of service  . . . . . . . . . TOS            *NORMAL
Maximum transmission unit  . . . . MTU            *LIND
Autostart  . . . . . . . . . . . . AUTOSTART      *YES
PVC logical channel identifier   PVCLGLCHLI
                          + for more values
X.25 idle circuit timeout  . . . IDLVCTTIMO     60
X.25 maximum virtual circuits  . MAXSVC         64
X.25 DDN interface . . . . . . . . DDN            *NO
TRLAN bit sequencing . . . . . . . BITSEQ         *MSB
```

*Figure 23. Sample Ethernet Interface Description (Ethernet TCP/IP)*

| Field | Notes |
|---|---|
| **Line description** | This value must match the Line Description (LIND) value you specify in the Ethernet Line Description (topic 79). |
| **Subnet mask** | This value must match the value on the Subnet Mask parameter in the Ethernet Attachment configuration (topic 77). |
| **Maximum transmission unit** | Specify ***LIND**, the default value. |

## Defining TCP/IP Configuration Values (V3R1 and V3R6)

To define TCP/IP configuration values, enter the WRKAFP2 command from an AS/400 command line. Figure 24 shows an example:

**Note:** For OS/400 Version 3 Release 1, specify the INACTTMR parameter. For OS/400 Version 3 Release 6, specify the RLSTMR parameter.

```
WRKAFP2 DEVD(PRT3935)
        TCPIP(*YES)
        RMTSYS('9.99.25.128')
        PORT(5001)
        ACTTMR(170)
        INACTTMR(*NOMAX)
        -or-
        RLSTMR(*NOMAX)
```

*Figure 24. WRKAFP2 Command Example*

| Field | Notes |
|---|---|
| **DEVD** | This value must match the Device Description (DEVD) value in the Printer Device description (topic 62). |
| **TCPIP** | Specify ***YES**. |
| **RMTSYS** | The IP address. The IP address you specify must match the IP Address parameter in the Token-Ring Attachment configuration (topic 59). |
| **PORT** | The port number you specify must match the PORT parameter in the Token-Ring Attachment configuration (topic 59). A TCP port value of **5001** is recommended. |
| **ACTTMR** | The number of seconds PSF/400 will wait for the printer to respond to an activation request. (An activation request occurs when PSF attempts to make a connection with the printer.) If the printer does not respond within this time, PSF/400 terminates.<br>If you want multiple AS/400s to share a printer, set this value to *NOMAX. ACTTMR(*NOMAX) means that PSF/400 will wait indefinitely to establish a connection with a printer, which may be busy because another PSF system is using it. |
| **INACTTMR**<br>**RLSTMR** | This value specifies how long PSF/400 will maintain a session with the printer while there are no spooled files with a status of RDY. A value of *NOMAX means PSF/400 will not release the connection to the printer until you enter ENDWTR. If you wish to have PSF/400 share this printer with another PSF system, use a value that is appropriate for your environment. |

## Defining TCP/IP Configuration Values (V3R2)

To define TCP/IP configuration values, enter the CRTPSFCFG command from an AS/400 command line. Figure 25 shows an example:

**Note:** For OS/400 Version 3 Release 1, specify the INACTTMR parameter. For OS/400 Version 3 Release 6, specify the RLSTMR parameter.

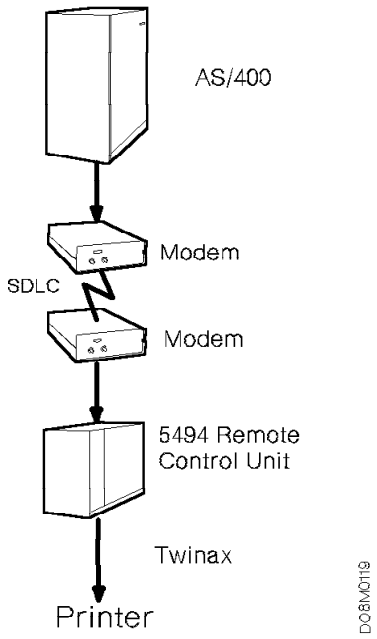
```
 PSF Configuration . . . . . .  PSFCFG       > PRT3935
   Library . . . . . .                         QGPL
User resource library list  .  USRRSCLIBL     *JOBLIBL
Device resource library list   DEVRSCLIBL
                        + for more values
IPDS pass through . . . . . .  IPDSPASTHR     *NO
Activate release timer  . . .  ACTRLSTMR      *NORDYF
Release timer . . . . . .  .   RLSTMR         *NOMAX
Restart timer . . . . . .  .   RESTRTMR       *IMMED
SNA retry count . . . . . .    RETRY          2
Delay time between SNA retries RETRYDLY       0
Text 'description'  . . . . .  TEXT           TCP/IP attached printer
Blank page    . . . . . .  .   BLANKPAGE      *YES
Page size control . . . . . .  PAGSIZCTL      *NO
Resident fonts  . . . . . .    RESFONT        *YES
Resource retention  . . . . .  RSCRET         *YES
Edge orient   . . . . . .  .   EDGEORIENT     *NO
Remote location:  . . . . . .  RMTLOCNAME
  Name or address . . . . . .                > '9.99.25.128'
TCP/IP port   . . . . . .  .   PORT           >5001
TCP/IP activation timer . . .  ACTTMR         170
PSF defined option  . . . . .  PSFDFNOPT      *NONE
                  + for more values
Replace   . . . . . .  . . .   REPLACE        *YES
Authority   . . . . . .  . .   AUT            *LIBCRTAUT
```

*Figure 25. CRTPSFCFG Command Example*

| Field | Notes |
|---|---|
| **ACTRLSTMR** | This parameter specifies the point at which the Release Timer (RLSTMR) is activated. Valid values are *NORDYF, *IMMED, *PRTNORDYF, AND *PRTIMMED. See *"AS/400 Advanced Series Printer Device Programming Version 3"*, SC41-3713, for additional information. |
| **PSFCFG** | This value must match the Device Description (DEVD) value in the Printer Device description (topic 57). The PSF configuration object must be created into library QGPL. |
| **RMTLOCNAME** | The IP address or host name. The IP address or IP address represented by the host name that you specify must match the IP Address parameter in the Ethernet Attachment configuration (topic 54). |
| **PORT** | The port number you specify must match the PORT parameter in the Ethernet Attachment configuration (topic 54). A TCP port value of **5001** is recommended. |
| **ACTTMR** | The number of seconds PSF/400 will wait for the printer to respond to an activation request. (An activation request occurs when PSF attempts to make a connection with the printer.) If the printer does not respond within this time, PSF/400 terminates.<br><br>If you want multiple AS/400s to share a printer, set this value to *NOMAX. ACTTMR(*NOMAX) means that PSF/400 will wait indefinitely to establish a connection with a printer, which may be busy because another PSF system is using it. |

| Field | Notes |
|---|---|
| **RLSTMR** | This is a timer whose value is referenced by the ACTRLSTMR parameter. A value of *NOMAX means PSF/400 will not release the connection or IPDS dialog until you enter ENDWTR, regardless of the value specified for ACTRLSTMR.<br><br>**Note:** For OS/400 Version 3 Release 1, this parameter was called INACTTMR. The PSF configuration commands for OS/400 Version 3 Release 2 offer increased functionality for RLSTMR. |

# Chapter 7. AS/400 Remote 5494 Twinaxial Attachment




*AS/400 Remote 5494 Twinaxial Attachment*. Note that the modems and leased line can be replaced by a modem eliminator.

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and twinaxial attachment:

- Complete the twinaxial attachment worksheet for your printer.
- Create the SDLC line description. See "SDLC Line Description (CRTLINSDLC)" on page 92.
- Create the APPC controller description for the 5494. See "APPC Controller Description for 5494 (CRTCTLAPPC)" on page 94.
- Create the APPC device description for the 5494. See "APPC Device Description for 5494 (CRTDEVAPPC)" on page 96.
- Create the controller description for the remote printer. See "Controller Description for Remote Printer (CRTCTLAPPC)" on page 98.
- Create the device description for the remote printer. See "Device Description for Remote Printer (CRTDEVPRT)" on page 100.
- Configure the 5494. See "5494 Controller Setup Description" on page 101.

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

For more information about requirements, refer to:

- Chapter 1, "Read This Chapter First" on page 1.
- *Advanced Function Presentation: Printer Information*, G544-3290.
- The Introduction and Planning Guide for your printer.

## Remote 5494 Twinaxial Attachment Worksheet

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the twinaxial attachment parameters in the leftmost column.

→ The lower part of the worksheet lists AS/400 configuration parameters that do not correspond to twinaxial attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the AS/400 environment is set up properly for the twinaxial attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 19. AS/400 Remote 5494 Twinaxial Attachment Configuration Worksheet*

| Printer Attachment Parameters | AS/400 Parameters | | | | | 5494 Parameters (see topic 101) | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|---|---|
| | SDLC Line Description (see topic 92) | APPC Controller Description for 5494 (see topic 94) | APPC Device Description for 5494 (see topic 96) | Controller Description (see topic 98) | Printer Device Description (see topic 100) | | | |
| Twinaxial link A installed | | | | | | | Yes or No | **Yes** |
| Station address | | | | | LOCADR | | 0 to 6 | |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | | | | | |
| | LIND | LINE | | | | | | |
| | MAXFRAME | MAXFRAME | | | | | | **1033** |
| | AUTOANSTYP | | | | | Field 3.5 | | ***DTR** |
| | CNN | | | | | Field 3.1 | | ***NONSWTPP** |
| | DUPLEX | | | | | Field 3.2 | | |
| | NRZI | | | | | Field 3.4 | | |
| | | LINKTYPE | | | | | | ***SDLC** |
| | | STNADR | | | | Field 2 | | |
| | | SWITCHED | | | | | | ***No** |
| | | APPN | APPN | | | | | ***Yes** |
| | | CTLD | CTL | | | | | |
| | | RMTCPNAME | RMTLOCNAME | RMTLOCNAME | | Field 12 | | |
| | | RMTNETID | RMTNETID | RMTNETID | | Field H1:3 | | |
| | | | LCLLOCNAME | LCLLOCNAME | | Field H1:1 | | |
| | | | | CTLD | CTL | | | |
| | | | | | AFP | | | ***YES** |
| | | | | | AFPATTACH | | | ***WSC** |
| | | | | | FORMFEED | | | ***AUTOCUT** |
| **Note:** Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9. | | | | | | | | |

*Table 20. AS/400 Remote 5494 Twinaxial Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | AS/400 Parameters | | | | | 5494 Parameters (see topic 101) | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|---|---|
| | SDLC Line Description (see topic 92) | APPC Controller Description for 5494 (see topic 94) | APPC Device Description for 5494 (see topic 96) | Controller Description (see topic 98) | Printer Device Description (see topic 100) | | | |
| **Note:** The menu tree for the following parameters is Attachments -> Twinaxial -> Configuration | | | | | | | | |
| Station address | | | | | LOCADR | | 0 to 6 | |
| Auto Start | | | | | | | Yes or No | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | | | | |
| Source Attachment | | | | | | | | **Twinaxial** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | | | | |
| Enable IPDS | | | | | | Enable or Disable | | **Enable** |
| **Note:** The rest of this table lists AS/400 configuration parameters that are required or recommended, or that must match other AS/400 configuration parameters. | | | | | | | | |
| | LIND | LINE | | | | | | |
| | MAXFRAME | MAXFRAME | | | | | | **1033** |
| | AUTOANSTYP | | | | | Field 3.5 | | ***DTR** |
| | CNN | | | | | Field 3.1 | | ***NONSWTPP** |
| | DUPLEX | | | | | Field 3.2 | | |
| | NRZI | | | | | Field 3.4 | | |
| | | LINKTYPE | | | | | | ***SDLC** |
| | | STNADR | | | | Field 2 | | |
| | | SWITCHED | | | | | | ***No** |
| | | APPN | APPN | | | | | ***Yes** |
| | | CTLD | CTL | | | | | |
| | | RMTCPNAME | RMTLOCNAME | RMTLOCNAME | | Field 12 | | |
| | | RMTNETID | RMTNETID | RMTNETID | | Field H1:3 | | |
| | | | LCLLOCNAME | LCLLOCNAME | | Field H1:1 | | |
| | | | | CTLD | CTL | | | |
| | | | | | AFP | | | ***YES** |
| | | | | | AFPATTACH | | | ***WSC** |
| | | | | | FORMFEED | | | ***AUTOCUT** |
| **Note:** Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9. | | | | | | | | |

## Remote 5494 Twinaxial Attachment Configuration

Figure 26 shows a sample twinaxial attachment configuration for a remote 5494. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" for a description of parameters unique to the 3130 Release 2.

```
Twinaxial Attachment A Installed                    Yes
Twinaxial Attachment B Installed                    No
Station Address                                     1
Card 1 slot position                                1
Card 2 slot position                                Not installed
```

*Figure 26. Sample AS/400 Remote 5494 Twinaxial Attachment Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Twinaxial A Install Status** | Specifies whether or not the Twinaxial A attachment is installed. Specify **Yes**. |
| **Twinaxial B Install Status** | Specifies whether or not the Twinaxial B attachment is installed. This value is preset and cannot be changed. |
| **Station Address** | Defines the destination address that the AS/400 uses to send information to the local logical unit. This value must match the Local Location Address (LOCADR) value in the Printer Device description (topic 100). |
| **Card 1 slot position** | Specifies the Micro Channel card slot of the attachment adapter designated as link A. This value is preset and cannot be changed. |
| **Card 2 slot position** | Specifies the Micro Channel card slot of the attachment adapter designated as link B. This value is preset and cannot be changed. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **Twinaxial**. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Enable IPDS** | Specify **ENABLED.**<br><br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |

## SDLC Line Description (CRTLINSDLC)

To create the SDLC line description, enter the CRTLINSDLC command from an AS/400 command line. To update an existing description, use the CHGLINSDLC command.

Figure 27 shows a sample SDLC line description for an SDLC attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
Line description . . . . . :   LIND         REMV35
Option . . . . . :   OPTION       *ALL
Category of line . . . . . :                *SDLC
Resource names . . . . . :   RSRCNAME     LIN051
Online at IPL  . . . . . :   ONLINE       *YES
Data link role . . . . . :   ROLE         *NEG
Physical interface . . . . . :   INTERFACE    *V35
Connection type  . . . . . :   CNN          *NONSWTPP
Switched network backup  . . . . . :   SNBU         *NO
Exchange identifier  . . . . . :   EXCHID       05643562
NRZI data encoding . . . . . :   NRZI         *YES
Maximum controllers  . . . . . :   MAXCTL       1
Clocking . . . . . :   CLOCK        *MODEM
Line speed . . . . . :   LINESPEED    56000
Modem type supported . . . . . :   MODEM        *NORMAL
Autoanswer type  . . . . . :   AUTOANSTYP   *DTR
Maximum frame size . . . . . :   MAXFRAME     1033
Error threshold level  . . . . . :   THRESHOLD    *OFF
Duplex . . . . . :   DUPLEX       *HALF
Modulus  . . . . . :   MODULUS      8
Text . . . . . :   TEXT         SDLC V35 Line
Attached nonswitch controllers . . :   CTL
-----------Attached Nonswitched Controllers------------
SDLC5494
Link speed . . . . . :   LINKSPEED    48000
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
Maximum outstanding frames . . . . :   MAXOUT       7
Inactivity timer . . . . . :   INACTTMR     300
Poll response delay  . . . . . :   POLLRSPDLY   0
Nonproductive receive timer  . . . :   NPRDRCVTMR   320
Idle timer . . . . . :   IDLTMR       30
Connect poll timer . . . . . :   CNNPOLLTMR   30
Poll cycle pause . . . . . :   POLLPAUSE    0
Frame retry  . . . . . :   FRAMERTY     7
Data Set Ready drop timer  . . . . :   DSRDRPTMR    6
Clear To Send timer  . . . . . :   CTSTMR       25
Remote answer timer  . . . . . :   RMTANSTMR    60
Recovery limits  . . . . . :   CMNRCYLMT
  Count limit  . . . . . :                2
  Time interval  . . . . . :                5
```

*Figure 27. Sample SDLC Line Description (Remote 5494)*

| Field | Notes |
|---|---|
| **Line Description** | This value must match the Attached Nonswitched Line (LINE) value in the APPC controller description for the 5494 (topic 94). |
| **Physical Interface** | Specify this as follows:<br>• For a V.24/19.2Kb line, specify ***RS232V24**.<br>• For a V.35/56Kb line, specify ***V35**. |
| **Connection type** | Specify ***NONSWTPP**. |
| **NRZI data encoding** | This value corresponds to Field 3.4 in the 5494 configuration (topic 101).<br>• If Field 3.4 is 0, specify ***Yes**.<br>• If Field 3.4 is 1, specify ***No**. |
| **Attached Nonswitched Controllers** | The list must include the name of the 5494 controller specified on the Controller Description (CTL) parameter in the APPC controller description for the 5494 (topic 94). |
| **Line Speed** | Specify this as follows:<br>• For a V.24/19.2Kb line, specify **19200**.<br>• For a V.35/56Kb line, specify **56000**. |
| **Autoanswer Type** | This value corresponds to Field 3.5 in the 5494 configuration (topic 101). Specify ***DTR**. |
| **Maximum Frame Size** | Specify **1033** to permit the printer to use its maximum value. If you specify a value less than 1033, the printer adjusts its frame size accordingly.<br>The value you specify for Maximum Frame Size must match the value you specify for the Maximum Frame Size (MAXFRAME) parameter in the controller description for the 5494 (topic 94). |
| **Duplex** | This value corresponds to Field 3.2 in the 5494 configuration (topic 101).<br>• If Field 3.2 is 0, specify ***Half**.<br>• If Field 3.2 is 1, specify ***Full**. |
| **Link Speed** | Specify this as follows:<br>• For a V.24/19.2Kb line, specify **9600**.<br>• For a V.35/56Kb line, specify **48000**. |

## APPC Controller Description for 5494 (CRTCTLAPPC)

To create the APPC controller description, enter the CRTCTLAPPC command from an AS/400 command line. To update an existing description, use the CHGCTLAPPC command.

Figure 28 shows a sample APPC Controller description for a 5494 remote controller attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
Controller description . . . . . :   CTLD         SDLC5494
Option . . . . . :   OPTION       *ALL
Category of controller . . . . . :                *APPC
Link type  . . . . . :   LINKTYPE     *SDLC
Online at IPL  . . . . . :   ONLINE       *YES
Switched connection  . . . . . :   SWITCHED    *NO
Switched network backup  . . . . . :   SNBU         *NO
Attached nonswitched line  . . . . :   LINE         REMV35
Character code . . . . . :   CODE         *EBCDIC
Maximum frame size . . . . . :   MAXFRAME    1033
Remote network identifier  . . . . :   RMTNETID    APPN
Remote control point . . . . . :   RMTCPNAME   CP5494
Exchange identifier  . . . . . :   EXCHID      07300002
SSCP identifier  . . . . . :   SSCPID      050000000000
Data link role . . . . . :   ROLE         *NEG
Station address  . . . . . :   STNADR      02
Autocreate device  . . . . . :   AUTOCRTDEV  *ALL
Text . . . . . :   TEXT         APPC ctl for SDLC V.35 att 5494

Attached devices . . . . . :   DEV
------------------Attached Devices--------------------
CP5494         REM5494
APPN-capable . . . . . :   APPN         *YES
APPN CP session support  . . . . . :   CPSSN        *NO
APPN node type . . . . . :   NODETYPE     *LENNODE
APPN transmission group number . . :   TMSGRPNBR   1
Autodelete device  . . . . . :   AUTODLTDEV  1440
User-defined 1 . . . . . :   USRDFN1      *LIND
User-defined 2 . . . . . :   USRDFN2      *LIND
User-defined 3 . . . . . :   USRDFN3      *LIND
SDLC poll priority . . . . . :   POLLPTY      *NO
SDLC poll limit  . . . . . :   POLLLMT      0
SDLC out limit . . . . . :   OUTLMT       *POLLLMT
SDLC connect poll retry  . . . . . :   CNNPOLLRTY  *NOMAX
SDLC NDM poll timer  . . . . . :   NDMPOLLTMR  *CALC
Recovery limits  . . . . . :   CMNRCYLMT
  Count limit  . . . . . :                2
  Time interval  . . . . . :                5
```

*Figure 28. Sample APPC Controller Description (SDLC)*

| Field | Notes |
|---|---|
| **Controller Description** | This value must match the Attached Controller (CTL) value in the APPC Device description for the 5494 (topic 96). |
| **Link Type** | Specify ***SDLC**. |
| **Switched Connection** | Specify ***NO**, the default value. |
| **Attached Nonswitched Line** | This must match the LIND parameter in the SDLC Line description (topic 92). |

| Field | Notes |
|---|---|
| **Maximum Frame Size** | Specify **1033** to permit the printer to use its maximum value. If you specify a value less than 1033, the printer adjusts its frame size accordingly.<br><br>The value you specify for Maximum Frame Size must match the value you specify for the Maximum Frame Size (MAXFRAME) parameter in the SDLC Line description (topic 92). |
| **Remote Network Identifier** | Specify the name of the network in which the printer resides.<br><br>The value you specify for Remote Network Identifier must be specified for all of the following:<br><br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Device description for the 5494. (topic 96).<br><br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Controller description for the remote printer (topic 98).<br><br>• Field H1:3 in the 5494 configuration (see topic 101). |
| **Remote Control Point** | This value must match:<br><br>• The Remote Location Name (RMTLOCNAME) in the APPC Device description for the 5494 (topic 96).<br><br>• The Remote Location Name (RMTLOCNAME) in the APPC Controller description for the remote printer (topic 98).<br><br>• Field 12 in the 5494 configuration (see topic 101). |
| **Station Address** | This value must match the value in Field 2 in the 5494 configuration (topic 101). |
| **Attached Devices** | The list must include the name of the 5494 device specified on the Device Description (DEVD) parameter in the APPC device description for the 5494 (topic 96). |
| **APPN-capable** | Specify ***YES**. |

## APPC Device Description for 5494 (CRTDEVAPPC)

To create the APPC device description, enter the CRTDEVAPPC command from an AS/400 command line. To update an existing description, use the CHGDEVAPPC command.

Figure 29 shows a sample APPC device description for an SDLC attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
Device description . . . . . :   DEVD         CP5494
Option . . . . . :   OPTION       *ALL
Category of device . . . . . :                *APPC
Automatically created  . . . . . :            YES
Remote location  . . . . . :   RMTLOCNAME   CP5494
Online at IPL  . . . . . :   ONLINE       *NO
Local location . . . . . :   LCLLOCNAME   BLDSYS1
Remote network identifier  . . . . :   RMTNETID     APPN
Attached controller  . . . . . :   CTL          SDLC5494
Message queue  . . . . . :   MSGQ         QSYSOPR
  Library  . . . . . :                        *LIBL
Local location address . . . . . :   LOCADR      00
APPN-capable . . . . . :   APPN         *YES
Single session . . . . . :   SNGSSN
  Single session capable . . . . . :          *NO
Text . . . . . :   TEXT         AUTOMATICALLY CREATED BY QLUS

Mode . . . . . :   MODE
-------------------------Mode--------------------------
*NETATR
```

*Figure 29. Sample APPC Device Description (SDLC)*

| Field | Notes |
|---|---|
| **Controller Description** | This value must be listed under the Attached Devices (DEV) entry in the APPC Controller description for the 5494 (topic 94). |
| **Remote Location** | Remote Location (RMTLOCNAME) must match:<br>• The Remote Control Point (RMTCPNAME) in the Controller description for the 5494 (topic 94).<br>• The Remote Location Name (RMTLOCNAME) in the Controller description for the remote printer (topic 98).<br>• Field 12 in the 5494 configuration (see topic 101).<br>**Important**<br>This value must be unique within a network. |

| Field | Notes |
|---|---|
| **Local Location** | Specify the default local location of the AS/400 that owns the printer. To determine the default local location, enter the command DSPNETA on the AS/400. The response will include a line similar to this:<br>`Default local location . . . . . : BLDSYS1`<br>where BLDSYS1 (or the actual value you see in its place) is the value to specify.<br>Local Location must match:<br>• The Local Location (LCLLOCNAME) parameter in the Controller description for the remote printer (topic 98).<br>• Field H1:1 in the 5494 configuration (see topic 101).<br>**Note:** You can specify *NETATR to “pick up” the default local location for LCLLOCNAME. |
| **Remote Network Identifier** | Specify the name of the network in which the printer resides.<br>The value you specify for Remote Network Identifier must be specified for all of the following:<br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Controller description for the 5494 (topic 94).<br>• The Remote Network Identifier (RMTNETID) parameter in the Controller description for the remote printer (topic 98).<br>• Field H1:3 in the 5494 configuration (see topic 101). |
| **Attached Controller** | This value must match the Controller Description (CTLD) value in the APPC Controller description for the 5494 (topic 94). |
| **APPN-capable** | Specify ***YES**. |

## Controller Description for Remote Printer (CRTCTLAPPC)

To create a description for the controller for the remote printer, enter the CRTCTLAPPC command from an AS/400 command line. To update an existing description, use the CHGCTLAPPC command.

Figure 30 shows a sample controller description for a remote printer attached by a twinax cable to a 5494. Highlighted values are required or recommended, or they must match another configuration value.

```
Controller description . . . . . :   CTLD         CP549RMT
Option . . . . . :   OPTION       *ALL
Category of controller . . . . . :                *RWS
Controller type  . . . . . :   TYPE         5494
Controller model . . . . . :   MODEL        2
Link type  . . . . . :   LINKTYPE     *NONE
Online at IPL  . . . . . :   ONLINE       *YES
Remote location  . . . . . :   RMTLOCNAME   CP5494
Local location . . . . . :   LCLLOCNAME   BLDSYS1
Remote network identifier  . . . . :   RMTNETID     APPN
Autocreate device  . . . . . :   AUTOCRTDEV   *ALL
Switched disconnect  . . . . . :   SWTDSC       *YES
Text . . . . . :   TEXT         Controller Description

Attached devices . . . . . :   DEV
------------------Attached Devices--------------------
PRT3935    CP54DSP00
Device wait timer  . . . . . :   DEVWAITTMR   120
Allocation retry timer . . . . . :   ALCRTYTMR    180
Recovery limits  . . . . . :   CMNRCYLMT
  Count limit  . . . . . :                2
  Time interval  . . . . . :                5
```

*Figure 30. Sample Controller Description for Remote Twinax Printer*

| Field | Notes |
|---|---|
| **Controller Description** | The Attached Controller (CTL) value in the Printer Device description (topic 100) must match the value you specify for Controller Description. |
| **Remote Location Name** | The Remote Location Name (RMTLOCNAME) must match:<br>• The Remote Control Point (RMTCPNAME) in the SDLC Controller description.<br>• The Remote Location Name (RMTLOCNAME) in the Device description for the 5494 (topic 96).<br>• Field 12 in the 5494 configuration (see topic 101). |
| **Local Location** | Local Location (LCLLOCNAME) must match:<br>• The Local Location (LCLLOCNAME) in the Device description for the 5494 (topic 96).<br>• Field H1:1 in the 5494 configuration (see topic 101). |

| Field | Notes |
| --- | --- |
| **Remote Network Identifier** | Specify the name of the network in which the printer resides.<br><br>The value you specify for Remote Network Identifier must be specified for all of the following:<br><br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Controller description for the 5494 (topic 94).<br><br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Device description for the 5494 (topic 96).<br><br>• Field H1:3 in the 5494 configuration (see topic 101). |

## Device Description for Remote Printer (CRTDEVPRT)

**Important**

If you auto-configure the printer, make sure you specify the Advanced Function Printing (AFP) and Form Feed (FORMFEED) parameters as shown below.

To create the Printer Device description, enter the CRTDEVPRT command from an AS/400 command line. To update an existing description, use the CHGDEVPRT command.

Figure 31 shows a sample Printer Device description for a twinaxial attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
 Device description . . . . . :   DEVD        PRT3935
 Option . . . . . :   OPTION      *ALL
 Category of device . . . . . :               *PRT
 Device class . . . . . :   DEVCLS      *RMT
 Device type  . . . . . :   TYPE        *IPDS
 Device model . . . . . :   MODEL       0
 Advanced function printing . . . . :   AFP         *YES
 AFP attachment . . . . . :   AFPATTACH   *WSC
 Port number  . . . . . :   PORT        1
 Local location address . . . . . :   LOCADR      01
 Online at IPL  . . . . . :   ONLINE      *YES
 Attached controller  . . . . . :   CTL         CP549RMT
 Font . . . . . :   FONT
   Identifier . . . . . :               011
   Point size . . . . . :               *NONE
 Form feed  . . . . . :   FORMFEED    *AUTOCUT
 Separator drawer . . . . . :   SEPDRAWER   *FILE
 Separator program  . . . . . :   SEPPGM      *NONE
   Library  . . . . . :
 Printer error message  . . . . . :   PRTERRMSG   *INQ
 Message queue  . . . . . :   MSGQ        QSYSOPR
   Library  . . . . . :                 *LIBL
 Maximum pending requests . . . . . :   MAXPNDRQS   6
 Print while converting . . . . . :   PRTCVT      *YES
 Form definition  . . . . . :   FORMDF      F1C10110
   Library  . . . . . :                 *LIBL
 Text . . . . . :   TEXT        Printer Description
```

*Figure 31. Sample Printer Device Description*

| Field | Notes |
|---|---|
| **Advanced Function Printing** | Specify ***YES**. |
| **AFP Attachment** | Specify ***WSC**. |
| **Local location address** | This value must match the Station Address parameter in the Twinaxial Attachment configuration (topic 91) |
| **Attached Controller** | This value must match the Controller Description (CTLD) value in the Controller Description (topic 98). |
| **Form Feed** | Specify ***AUTOCUT**. |

## 5494 Controller Setup Description

The following list describes fields in the 5494 configuration that must match fields in the AS/400 configuration. For more information, see the *5494 User's Guide*, GA27-3960.

| Field | Notes |
|---|---|
| **Field AA (Communication Mode)** | The communication mode your 5494 uses to communicate with the AS/400 system. Specify **0** to indicate the communication mode is SDLC. |
| **Field 2 (Station Address)** | The value you specify for this field must match the value you specify for the Station Address (STNADR) parameter in the APPC Controller description for the 5494 (topic 94). |
| **Field 3 (Communication)** | Field 3 contains several subfields; the following list shows the values used for the sample configurations, and the AS/400 parameters they must match (if any):<br>**Subfield 1, Line Type**<br>Values: 0 = leased, 1 = switched, 2 = switched/V.25bis<br>Specify **0** for leased line.<br>**Subfield 2, Line Facility**<br>Values: 0=half-duplex, 1=full-duplex<br>Specify **0** for half-duplex. This value corresponds to the Duplex (DUPLEX) parameter in the SDLC line description (topic 92).<br>**Subfield 3, Connection Type**<br>Values: 0 = multipoint, 1 = point-to-point<br>Specify **1** for point-to-point.<br>**Subfield 4, Data Encoding**<br>Values: 0=NRZI, 1=NRZ<br>Specify **0** for NRZI. This value corresponds to the NRZI data encoding (NRZI) parameter in the SDLC line description (topic 92).<br>**Subfield 5, Connection Method**<br>Values: 0=DTR, 1=CDSTL<br>Specify **0** for DTR. This value corresponds to the Auto Answer (AUTOANSTYP) parameter in the SDLC line description (topic 92).<br>**Subfield 6, Send Leading Pad**<br>Values: 0=No, 1=Yes<br>Specify **0**, the default value.<br>**Subfield 7, Local Loopback Support**<br>Values: 0=No, 1=Yes<br>Specify **0**, the default value. |
| **Field 12 (5494 LU Name)** | This value must match:<br>• The Remote Control Point (RMTCPNAME) parameter in the APPC Controller description for the 5494 (topic 94)<br>• The Remote Location (RMTLOCNAME) parameter in the APPC Device description for the 5494 (topic 96)<br>• The Remote Location (RMTLOCNAME) parameter in the Controller Description for the remote printer (topic 98) |

| Field | Notes |
|---|---|
| **Field 13 (5494 CP Name)** | The control point (CP) name of the 5494. This must match:<br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Controller description for the 5494 (topic 94)<br>• The Remote Network Identifier (RMTNETID) parameter in the APPC Device description for the 5494 (topic 96)<br>• The Remote Network Identifier (RMTNETID) parameter in the Controller Description for the remote printer (topic 98) |
| **Field H1:1 (AS/400 System 1 LU Name)** | The LU name of the AS/400 system. This field must match:<br>• The Local Location (LCLLOCNAME) parameter in the APPC Device description for the 5494 (topic 96)<br>• The Local Location (LCLLOCNAME) parameter in the Controller Description for the remote printer (topic 98) |
| **Field H1:2 (AS/400 System 1 Network Name)** | The network name of the host. This field must match the local network ID (LCLNETID) defined in the AS/400 system. |
| **Field H1:3 (AS/400 System 1 5494 Network Name)** | The 5494 network name. This field must match the Remote Network Name parameter in the attachment configuration. If the 5494 is in the same network as the host, this value will also match Field H1:2. |

# MVS, VM, and VSE SNA Attachments

# Chapter 8. Common Configuration Tasks

**Important**

The tasks described in this chapter apply to all SNA printer attachment configurations for MVS, VM, and VSE. For the parallel channel attachment, see “370 Parallel Channel Attachment” on page 321. For MVS TCP/IP attachments, see “MVS TCP/IP Attachments” on page 213. These tasks include:

- Updating the JES printer definitions if your host system is MVS. See “MVS Printer Definitions” on page 106.
- Updating the startup procedure for your host system:
  - “PSF/MVS Startup Procedure” on page 107
  - “PSF/VSE Startup Procedure” on page 109
  - “PSF/VM PDM Definition” on page 110
- Updating the following VTAM definitions:
  - “Member ATCCON00” on page 111
  - “VTAM APPLID” on page 111
  - “ATCSTR00 Data Set” on page 112

## MVS Printer Definitions

### JES2 Printer Definitions

Figure 32 shows the JES2 printer definition initialization member, located in the system parmlib.

```
*
FSSDEF FSSNAME=FSS3935,PROC=WRT3935,HASPFSSM=HASPFSSM
*
PRT3935   CLASS=Y,SEP,NOMARK,DRAIN,MODE=FSS,FSS=FSS3935,              X
 PRMODE=(LINE,PAGE),UCS=0
```

*Figure 32. PSF/MVS JES2 Printer Definition*

| Field | Notes |
|---|---|
| **PROC** | The value you specify on the PROC parameter must match the name on the PSF/MVS Startup Procedure. |

### JES3 Printer Definitions

Figure 33 shows an example of a JES3 printer definition. This example is NOT executable, but it is intended to help the JES3 system programmer define the printer to the MVS host.

```
* JES3 DEFINITION
*
FSSDEF,TYPE=WTR,FSSNAME=FSS3935,PNAME=WRT3935,SYSTEM=USIBMBQ
*
DEVICE,DTYPE=PRTAFP1,JNAME=PRT3935,FSSNAME=FSS3935,
JUNIT=(,USIBMBQ,,OFF),MODE=FSS,PM=(LINE,PAGE),HEADER=JOB,
CARRIAGE=(YES,STDL),CHARS=(YES,GT10),DYNAMIC=YES,BURST=YES
```

*Figure 33. PSF/MVS JES3 Printer Definition*

| Field | Notes |
|---|---|
| **JNAME** | The value you specify on the JNAME parameter must match the name of the printer FSA on the PSF/MVS Startup Procedure. |
| **SYSTEM, JUNIT** | The network value you specify on the SYSTEM and JUNIT parameters of the DEVICE statement must match:<br>• The Remote Network Name parameter in the attachment configuration.<br>• The NETID parameter in the ATCSTR00 data set. |

## Startup Procedures

Use the startup procedure that applies to the host system you use:

- “PSF/MVS Startup Procedure” on page 107.
- “PSF/VSE Startup Procedure” on page 109.
- “PSF/VM PDM Definition” on page 110.

## PSF/MVS Startup Procedure

Figure 34 shows a sample SNA startup procedure for PSF/MVS. Highlighted values are required or recommended, or they must match another configuration value.

```
//WRT3935 PROC
//*
//*-------------------------------------------------------------------*
//*                                                                   *
//* PSF 2.1                                                           *
//*-------------------------------------------------------------------*
//STEP01  EXEC PGM=APSPPIEP,REGION=3072K
//STEPLIB DD   DSN=SYSTEM.PSF.LINKLIB,DISP=SHR
//SYSPRINT DD SYSOUT=A
//SYSUDUMP DD SYSOUT=A
//*-------------------------------------------------------------------*
//* NOW FOR THE DEFINITIONS...                                        *
//*-------------------------------------------------------------------*
//JOBHDR OUTPUT PAGEDEF=A06462,     /* JOB HEADER PAGEDEF            */
//       FORMDEF=A10110,CHARS=GT12  /* JOB HEADER FORMDEF            */
//JOBTLR OUTPUT PAGEDEF=A06462,     /* JOB TRAILER PAGEDEF           */
//       FORMDEF=A10110,CHARS=GT12  /* JOB TRAILER FORMDEF           */
//DSHDR  OUTPUT PAGEDEF=A06462,     /* DS  PAGEDEF                   */
//       FORMDEF=A10110,CHARS=GT12  /* DS  FORMDEF                   */
//MSGDS  OUTPUT PAGEDEF=A06462,     /* MESSAGE DATASET PAGEDEF       */
//       FORMDEF=A10110,CHARS=GT15  /* MESSAGE DATASET FORMDEF       */
//*
//FONT01   DD   DSN=SYS1.FONT300,DISP=SHR  /* For 300-pel resolution */
//         DD   DSN=SYS1.FONTOLN,DISP=SHR  /* IBM Outline fonts      */
//*FONT01   DD   DSN=SYS1.FONT240,DISP=SHR /* For 240-pel resolution */
//*         DD   DSN=SYS1.FONTOLN,DISP=SHR  /* IBM Outline fonts      */
//PSEG01   DD   DSN=SYS1.PSEGLIB,DISP=SHR
//OLAY01   DD   DSN=SYS1.OVERLIB,DISP=SHR
//PDEF01   DD   DSN=SYS1.PDEFLIB,DISP=SHR
//FDEF01   DD   DSN=SYS1.FDEFLIB,DISP=SHR
//*
//PRT3935  CNTL
//PRT3935  PRINTDEV FONTDD=*.FONT01, /*FONT     LIBRARY DD           */
//          OVLYDD=*.OLAY01,        /* OVERLAY  LIBRARY DD           */
//          PSEGDD=*.PSEG01,        /* SEGMENT  LIBRARY DD           */
//          PDEFDD=*.PDEF01,        /* PAGEDEF  LIBRARY DD           */
//          FDEFDD=*.FDEF01,        /* FORMDEF  LIBRARY DD           */
//          JOBHDR=*.JOBHDR,        /* JOB HEADER DD                 */
//          JOBTRLR=*.JOBTLR,       /* JOB TRAILER DD                */
//          DSHDR=*.DSHDR,          /* DATA SET HEADER DD            */
//          MESSAGE=*.MSGDS,        /* MESSAGE DATA SET OUTPUT       */
//          PAGEDEF=A06462,         /* DEVICE PAGEDEF DEFAULT        */
//          FORMDEF=A10110,         /* DEVICE FORMDEF DEFAULT        */
//          CHARS=(GT10),           /* DEVICE DEFAULT FONT           */
//          PIMSG=(,999),           /* ACCUMULATE DATA SET MESSAGES  */
//          TRACE=YES,              /* ACTIVATE TRACE FUNCTION       */
//          DISCINTV=0,
//          MGMTMODE=IMMED,         /* PSF MANAGEMENT MODE START CONV*/
//          TIMEOUT=REDRIVE,        /* RETRY WITH MGMTMODE           */
//          APPLID=PSFFSA1,         /* VTAM APPLICATION PGM NODE NAME*/
//          LOGMODE=IBM3935,        /* VTAM LOGON MODE TABLE         */
//          DATACK=BLKCHAR,         /* DATA CHECK DEFINITION         */
//          FAILURE=WCONNECT,       /* FAILURE= WCONNECT/STOP        */
//          LUNAME=LU3935           /* VTAM LOGICAL UNIT NAME        */
//PRT3935   ENDCNTL
```

*Figure 34. PSF/MVS Sample Start Up Procedure (SNA)*

| Field | Notes |
|---|---|
| **PROC name** | The procedure name (WRT3935 in the example) must match one of the following:<br>• The name on the PROC parameter of the FSSDEF statement in the JES2 printer definition.<br>• The name on the PNAME parameter of the FSSDEF statement in the JES3 printer definition. |
| **Printer FSA name** | The label you specify on the CNTL, PRINTDEV, and ENDCTL statements (PRT3935 in the example) must match the name on the JNAME parameter of the DEVICE statement in the JES3 printer definition. |
| **MGMTMODE** | Set the MGMTMODE value to IMMED or OUTAVAIL for:<br>• SDLC modem attached printers<br>• Token-Ring attached printers with Call Type=Listen<br>For 3130 Release 2, MVS/PSF no longer uses the MGMTMODE=DIALIN parameter for any printer Calling In to the Host, for printer sharing. There are now three ways of setting the operation of PSF in the writer proc as follows:<br>`MGMTMODE= OUTAVAIL`<br>`FAILURE=WCONNECT`<br>`TIMEOUT=REDRIVE`<br>`DISCINTV=5`<br><br>`MGMTMODE=OUTAVAIL`<br>`FAILURE=WCONNECT`<br>`TIMEOUT=REDRIVE`<br>`RELMODE=IDLE`<br>`RELINTV=10`<br><br>`MGMTMODE=OUTAVAIL`<br>`FAILURE=WCONNECT`<br>`TIMEOUT=REDRIVE`<br>`RELMODE=TIME`<br>`RELINTV=10`<br>`ACQINTV=300`<br>The above parameters will printer share for SDLC communications as well as for SNA Token ring (Call In or Call Out). When VSE and VM incorporate sharing, it can be added to their definitions also. APAPs to the MVS system for RELREQ VTAM sharing are:<br>`MVS/ESA SP 5.1.0 APAR number OW16442`<br>`PSF/MVS 2.2.0 APAR number OW15018`<br>. |
| **APPLID** | APPLID must match the Remote LU Name and Control Point Name parameters in the attachment configuration and the APPLID on the VTAM Application Definition. |
| **LOGMODE** | The name you specify on the LOGMODE parameter must match:<br>• The name on the corresponding entry in the LOGMODE table and the value on the LOGMODE parameter on the MODEENT statement in the LOGMODE table.<br>• The name on the DLOGMOD parameter in the VTAM node definition. |
| **LUNAME** | LUNAME must match:<br>• The Local LU Name parameter in the attachment configuration.<br>• The name on the LU statement in the VTAM node definition. |

## PSF/VSE Startup Procedure

Figure 35 shows a sample PSF/VSE startup procedure. Highlighted values are required or recommended, or they must match another configuration value.

```
* $$ JOB JNM=PSFSTART,DISP=K,CLASS=8
* $$ LST CLASS=A,DISP=D
// JOB PSFSTART  PSF STARTUP
// LIBDEF *,SEARCH=(PRD2.AFP,PRD2.COMM,PRD2.CONFIG,PRD1.BASE)
// EXEC APTBMIEP,SIZE=APTBMIEP
PRT3935  PRINTDEV APPLID=PSFFSA1,    APPLICATION NAME FOR PSF/2 DPF
               CKPTPAGE=20,       CHECKPOINT TAKEN EVERY 20 PAGES
               DATACK=BLKCHAR,    DATA CHECK DEFINITION
               DISCINTV=0,        NETWORK INACTIVITY TIMER
               FAILURE=WCONNECT,  ACTION BY PSF AFTER PRINTER FAILURE
               FORMDEF=A10110,    FORMDEF - PRIMARY BIN DUPLEX OFF
               CHARS=(GT10),      DEVICE DEFAULT FONT SET
               LUNAME=LU3935,     LU NAME OF THE PRINTER LU
               MGMTMODE=IMMED,    PSF START SESSION IMMEDIATELY
               NOTIFY=YES,        MESSAGE ON CONSOLE IF PRINT ERROR
               PAGEDEF=V04863,    DEFAULT PAGEDEF-86 LINES AT 8 LPI
               PIMSG=(YES,0),     PSF MESSAGES ARE PRINTED
               SPBUFFER=8,        # of 4K BLOCKS FOR PSF SPOOL BUFFER
               LOGMODE=IBM3935    VTAM LOGMODE TABLE DEFINITION
/*
/&
* $$ EOJ
```

*Figure 35. PSF/VSE Start Up Procedure*

| Field | Notes |
|---|---|
| **APPLID** | APPLID must match the following:<br>• The Remote LU Name and Control Point Name parameters in the attachment configuration.<br>• The APPLID on the VTAM Application Definition. |
| **LUNAME** | LUNAME must match:<br>• The Local LU Name parameter in the attachment configuration.<br>• The name on the LU statement in the VTAM node definition. |
| **MGMTMODE** | Set the MGMTMODE value to IMMED or OUTAVAIL for:<br>• SDLC modem attached printers<br>• Token-Ring attached printers with Call Type=Listen<br>Set the MGMTMODE value to DIALIN for:<br>• Token-Ring attached printers with Call Type=Call |
| **LOGMODE** | The name you specify on the LOGMODE parameter must match:<br>• The name on the corresponding entry in the LOGMODE table and the value on the LOGMODE parameter on the MODEENT statement in the LOGMODE table.<br>• The name on the DLOGMOD parameter in the VTAM node definition. |

## PSF/VM PDM Definition

Figure 36 shows a sample PSF/VM PDM definition. Highlighted values are required or recommended, or they must match another configuration value.

```
**** VM PSF PDM DEFINITIONS ****
APPLID   PSFFSA1
LUNAME   LU3935
*******************************
PRTID     PDM3935
CLASS     Y
CONVERT   1O
DEST      PRT3935
FORM      STANDARD
DFLTFONT  GT1O
HEADFDEF  F1A1011O
HEADPDEF  P1VO4863
TAILFDEF  F1A1011O
TAILPDEF  P1VO4863
ITRACE    OFF
ITRCSIZE  512
LOGMODE   IBM3935
MGMTMODE  IMMED
PDMDISK   191
SFCM      SFCM1 193
SYSDIAG   MAINT *
TIMEOUT   REDRIVE
DISCINTV  0
FAILURE   WCONNECT *
```

*Figure 36. PSF/VM PDM Definitions*

| Field | Notes |
|---|---|
| **APPLID** | APPLID must match the following:<br>• The Remote LU Name and Control Point Name parameters in the attachment configuration.<br>• The APPLID on the VTAM Application Definition. |
| **LUNAME** | LUNAME must match:<br>• The Local LU Name parameter in the attachment configuration.<br>• The name on the LU statement in the VTAM node definition. |
| **LOGMODE** | The name you specify on the LOGMODE parameter must match:<br>• The name on the corresponding entry in the LOGMODE table and the value on the LOGMODE parameter on the MODEENT statement in the LOGMODE table.<br>• The name on the DLOGMOD parameter in the VTAM node definition. |
| **MGMTMODE** | Set the MGMTMODE value to IMMED or OUTAVAIL for:<br>• SDLC modem attached printers<br>• Token-Ring attached printers with Call Type=Listen<br>Set the MGMTMODE value to DIALIN for:<br>• Token-Ring attached printers with Call Type=Call |

## Common VTAM Definitions

## Member ATCCON00

Figure 37 example shows the update made to member ATCCON00.

```
PSFAPPLS, VBUILD TYPE=nnnnn, VBUILD TYPE=nnnnn                X
```

*Figure 37. MEMBER=ATCCON00 Definition for PSF Application*

The VBUILD TYPE values must correspond to the VTAM members that contain the application definition statements and switched major nodes. You can define more than one VBUILD TYPE. For *nnnnn*, substitute one of the following values:

**SWNET** for printer nodes
**LOCAL** for 3174 nodes
**XCA** for 3172 LAN nodes
**LAN** for 9221 ICA LAN nodes

## VTAM APPLID

Figure 38 provides additional information about the VTAM application definition that the PSF startup procedure parameter references.

```
PSFAPPLS  VBUILD TYPE=APPL
PSFFSA1   APPL   AUTH=ACQ,EAS=1,SONSCIP=YES                  MVS/VSE/VM
```

*Figure 38. VTAM Application Definition for PSF*

| Field | Notes |
|---|---|
| **member name** | The VTAM member name (PSFAPPLS in the example) must match the update made to member ATCCON00. |
| **APPLID** | The APPLID (PSFFSA1 in the example) must match the following:<br>• The Remote LU Name parameter in the attachment configuration.<br>• The APPLID in the PSF Startup Procedure.<br>• If the Call Type attachment parameter is set to CALL, the APPLID must also match the value on the LOGAPPL= statement in the VTAM major node definition or in the NCP definition.<br>**Note:** For 3130 Release 2, when using printer sharing, do not use the LOGAPPL=APPLID parameter on the LU statements. |

## ATCSTR00 Data Set

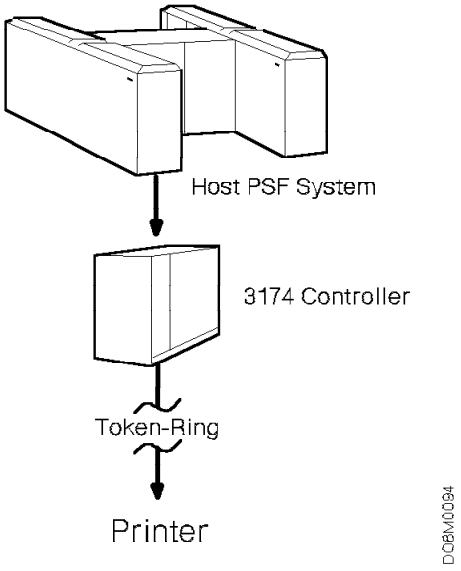
Figure 39 shows a sample ATCSTR00 data set. Highlighted values are required or recommended, or they must match another configuration value.

```
***************** ATCSTR00 Dataset ****************************

SSCPID=0,                                                      *
HOSTSA=1,                                                      *
SSCPNAME=SSCP01,                                               *
HOSTPU=NODE01,                                                 *
NOPROMPT,                                                      *
NETID=USIBMBQ,                                                 *
MAXSUBA=255,                                                   *
CONFIG=00,                                                     *
IOINT=0,                                                       *
SGALIMIT=0,                                                    *
BSBUF=(28,,,1),                                                *
CRPLBUF=(60,,,1),                                              *
LFBUF=(25,1968,,11),                                           *
LPBUF=(12,,,6),                                                *
SFBUF=(20,,,20),                                               *
SPBUF=(210,,,32),                                              *
VFBUF=204800,                                                  *
VPBUF=446464,                                                  *
XDBUF=(6,,,1)
```

*Figure 39. ATCSTR00 Data Set*

| Field | Notes |
|---|---|
| **SSCPID** | Specifies the ID (in decimal) of the controlling system services control point in the SNA network. This value must be converted to hexadecimal and supplied on the SSCP ID parameter in the attachment configuration.<br><br>The printer uses this ID to send information to the host system's Netview Programs. If the host does not use Netview, or the SNA Intervention Timer is set to 99, set SSCP ID to **0**. |
| **NETID** | The value you specify for NETID must match:<br><br>• The Remote Network Name parameter in the attachment configuration.<br>• The SYSTEM parameter on the JES3 printer definition FSSDEF statement.<br>• The JUNIT parameter on the JES3 printer definition DEVICE statement. |
| **VFBUF** | If you are using a 9221 ICA in a VSE environment, set VFBUF to 307200. |
| **VPBUF** | If you are using a 9221 ICA in a VSE environment, set VPBUF to 669696. |

# Chapter 9. Local 3174 Token-Ring Attachment




*Local 3174 Token-Ring Attachment*

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and local 3174 token-ring attachment:

**Tasks described in this chapter:**

- Complete the worksheet for your printer.
- Update attachment-unique VTAM definitions, including:
  - "VTAM LOGMODE Table (Local 3174)" on page 121
  - "VTAM Local Major Node (3174)" on page 122
- Update the 3174 Configuration. See "Local 3174 Configuration" on page 123.

**Tasks described in other chapters:**

- Update the MVS printer definitions (if your host system is MVS). See "MVS Printer Definitions" on page 106.
- Update the startup procedure for your host system:
  - "PSF/MVS Startup Procedure" on page 107
  - "PSF/VSE Startup Procedure" on page 109
  - "PSF/VM PDM Definition" on page 110
- Update the following VTAM definitions, including:
  - "Member ATCCON00" on page 111
  - "VTAM APPLID" on page 111
  - "ATCSTR00 Data Set" on page 112

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

## Local 3174 Token-Ring Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- The **Acceptable Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

→ The lower part of the worksheet lists configuration parameters that do not correspond to attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the host environment is set up properly for the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 21. Token-Ring SNA - Local 3174 Attachment Configuration Worksheet*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM Definitions | 3174 Configuration | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| Installed | | | | | Yes or No | **Yes** |
| XID Number | | | | | 07100000 to FFFFFFFF | **071** |
| Remote Network Name | | | NETID (ATCSTR00) | | Up to 8 characters | |
| SNA Intervention Timer | | | | | 0 to 99 (Minutes) | |
| Local LU Name | | LUNAME | Name of LU (Major Node) | | Up to 8 characters | |
| Remote LU Name | | APPLID | APPLID | | Up to 8 characters | |
| Mode Name | | | | | | **null (blank)** |
| Remote Address | | | | Items 900, 940, 941 | 400000000000 to 7FFFFFFFFFFF | |
| Local Network Name[2] | | | NETID (ATCSTR00) | | Up to 8 characters | |
| Control Point Name[2] | | APPLID | APPLID | | Up to 8 characters | |
| Alternate Address | | | | Items 940, 941 | 400000000000 to 7FFFFFFFFFFF | |
| Ring Speed (Mbps) | | | | Item 911 | 4 or 16 | |
| SSCP ID | | | SSCPID (ATCSTR00) | | 0000 to FFFF | |
| Local LU Address | | | LOCADDR (Major Node) | | 0 to 255 | |
| Call Type | | | | | Call or Listen | |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | | |
| | PROC(JES2), JNAME(JES3), PNAME(JES3) | PROC name (MVS only) | | | | |
| | | LOGMODE | LOGMODE (LOGMODE table) DLOGMOD (Major Node) | | | |
| | | | DELAY (Major Node) | | | **0** |
| | | | LOGAPPL (Major Node) APPLID | | | |
| | | | MAXBFRU (Major Node) | | | **5** |
| | | | RUSIZES (LOGMODE table) | | | **X'8787'** |

**Notes:**

1. Names can be one to eight characters. 0–9, A – Z, $, #, and @ are permitted, but the first character cannot be 0–9.
2. If you specify a Local Network Name, you must also specify a Control Point Name.

*Table 22 (Page 1 of 2). Token-Ring SNA - Local 3174 Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM Definitions | 3174 Configuration | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Protocols | | | | | | |
| Enable SNA | | | | | Enable or Disable | **Enable** |
| Enable TCP/IP | | | | | Enable or Disable | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> Address | | | | | | |
| Alternate Address | | | | Items 940, 941 | 400000000000 to 7FFFFFFFFFFF | |
| MAC Address | | | | | | Display only |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration | | | | | | |
| Auto Start | | | | | Yes or No | |
| Ring Speed (Mbps) | | | | Item 911 | 4 or 16 | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> SNA | | | | | | |
| XID Number | | | | | 071 to FFFFFFFF | **071** |
| Remote Network Name | | | NETID (ATCSTR00) | | Up to 8 characters | |
| SNA Intervention Timer | | | | | 0 to 99 (Minutes) | |
| Local LU Name | | LUNAME | Name of LU (Major Node) | | Up to 8 characters | |
| Remote LU Name | | APPLID | APPLID | | Up to 8 characters | |
| Mode Name | | | | | | **null (blank)** |
| Remote Address | | | | Items 900, 940, 941 | 400000000000 to 7FFFFFFFFFFF | |
| Local Network Name[2] | | | NETID (ATCSTR00) | | Up to 8 characters | |
| Control Point Name[2] | | | | | Up to 8 characters | |
| SSCP ID | | | SSCPID (ATCSTR00) | | 0000 to FFFF | |
| Local LU Address | | | LOCADDR (Major Node) | | 0 to 255 | |
| Call Type | | | | | Call or Listen | |
| Solicit SSCP | | | | | Yes or No | **YES** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | | |
| Source Attachment | | | | | | **SNA TOKEN RING** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | | |
| Enable IPDS | | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | | |
| | PROC(JES2), JNAME(JES3), PNAME(JES3) | PROC name (MVS only) | | | | |

*Table 22 (Page 2 of 2). Token-Ring SNA - Local 3174 Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM Definitions | 3174 Configuration | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | | LOGMODE | LOGMODE (LOGMODE table)<br>DLOGMOD (Major Node) | | | |
| | | | DELAY (Major Node) | | | **0** |
| | | | LOGAPPL (Major Node)<br>APPLID | | | |
| | | | MAXBFRU (Major Node) | | | **5** |
| | | | RUSIZES (LOGMODE table) | | | **X′8787′** |

**Notes:**

1. Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9.
2. If you specify a Local Network Name, you must also specify a Control Point Name.

## Local 3174 Token-Ring Attachment Configuration

Figure 40 shows a sample configuration for a local 3174 token-ring attachment. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 120 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
XID number:                 7100000
Remote network name:        USIBMBQ
SNA Intervention Timer:     99
Local LU name:              LU3935
Remote LU name:             PSFFSA1
Mode name:
Remote address:             400015000001
Local network name:         USIBMBQ
Control point name:         PSFFSA1
Alternate address:          4000200000E5
Ring speed:                 16
SSCP ID:                    0000
Local LU address:           1
Call Type:                  Call
```

*Figure 40. Local 3174 Token-Ring Attachment Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Install Status** | Specify **Yes**. |
| **XID Number** | An ID that distinguishes a specific piece of equipment from all other similar pieces of equipment on the network. |
| **Remote Network Name** | The name of the network that the host belongs to. This value should match the value on the NETID statement in the ATCSTR00 data set (see topic 112). |
| **SNA Intervention Timer** | This timer defines how many minutes the printer waits before notifying the host that an attachment is not operating. The delay provides time to fix the problem at the printer without having an alert sent to the host. The timer can be set from 0 to 98 minutes. To turn the timer off, specify 99.<br><br>**Note:** IBM recommends that you set the SNA Intervention Timer in the printer configuration to **off** for printer sharing. If not, other writers can print their jobs before the original writer can get back to finish the job that had an intervention that caused the SNA Intervention Timer to expire. |
| **Local LU Name** | The name of the local logical unit. The value you specify for Local LU Name must match:<br>• The value on the LUNAME statement in the PSF Startup Procedure (see topic 106).<br>• The name on the LU statement in the VTAM Major Node definition (see topic 122). |

| Printer Attachment Parameter | Notes |
|---|---|
| **Remote LU Name** | The name of the remote logical unit. The value you specify for Remote LU Name must match:<br>• The VTAM APPLID (see topic 111).<br>• The APPLID in the PSF Startup Procedure (see topic 106). |
| **Mode Name** | Mode name should be null (blank). |
| **Remote Address** | The remote host token-ring adapter card address. The value you specify for Remote Address must match the remote host token-ring adapter card address you specify for Items 900, 940, and 941 in the 3174 Configuration (see topic 123). |
| **Local Network Name** | The name of the network the printer is attached to. This value should match the value on the Remote Network Name parameter. |
| **Control Point Name** | The printer control point name. The Control Point Name must be a unique address on the token ring.<br>**For printers other than the 3130 Release 2**, you can specify the control point name in the attachment configuration, or in a VTAM definition. If you specify Control Point Name in the attachment configuration, it must match:<br>• The VTAM APPLID (see topic 111).<br>• The APPLID in the PSF Startup Procedure (see topic 106).<br>**For the 3130 Release 2**, Control Point Name is not used; however, it must not be blank and it must not match the APPLID. Instead, specify a unique value such as PRT1 or PRT2. |
| **Alternate Address** | Sets the LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. The value you specify for Alternate Address must match the LAN adapter unique address you specify for Items 940 and 941 in the 3174 Configuration (see topic 123).<br>If Call Type is set to Listen, Alternate Address must also match the last twelve digits on the DIALNO statement in the VTAM Local Major Node definition (see topic 122) |
| **Ring Speed** | The ring speed of the network the adapter is attached to. The value you specify for Ring Speed must match Item 911 in the 3174 Configuration (see topic 123). Specifying the wrong value can cause the network to stop operating. |
| **SSCP ID** | Specifies the ID of the controlling system services control point in the SNA network. Although the SSCP Identifier is 12 digits, you specify only the last four digits in the attachment configuration. The printer automatically sets the first eight digits to 0500 0000.<br>This value must be the hexadecimal equivalent of the decimal value on the SSCPID statement in the ATCSTR00 data set (see topic 112).<br>The printer uses this ID to send information to the host system's Netview Programs. If the host does not use Netview, or the SNA Intervention Timer is set to 99, set SSCP ID to **0**. |
| **Local LU Address** | The destination address used by other systems to send information to the local logical unit. The value you specify for Local LU Address must match the LOCADDR parameter on the LU statement in the VTAM Local Major Node definition (see topic 122). |

| Printer Attachment Parameter | Notes |
|---|---|
| **Call Type** | Specifies how the host and printer make contact. There are two settings: Call and Listen.<br>• If you set Call Type to **Call**, the printer initiates contact with the host. The LOGAPPL statements in the VTAM Local Major Node definition (see topic 122) must specify the VTAM APPLId (see topic 97).<br>**Note:** For 3130 Release 2, when using printer sharing, do not use the LOGAPPL=APPLID parameter on the LU statements.<br>**Note:**<br>• If you set Call Type to **Listen**, the printer waits, or "listens," for calls from the host. The last twelve digits on the DIALNO statement in the VTAM Local Major Node definition must match the value you specify for Alternate Address.<br>**Note:** For 3174 local attachment, a Call Type of **Call** is recommended. If you set Call Type to Listen, then every time the printer is disabled, started, or shutdown, the VTAM node at the host must be recycled from Inactive to Active. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Enable SNA** | Specifies whether the token ring is enabled or disabled for SNA. Specify **Enabled** (the default value). |
| **Enable TCP/IP** | Specifies whether the token ring is enabled or disabled for TCP/IP. The default is **Enabled**. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. You can use the MAC address for the printer's alternate address. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **SNA Token Ring**. |
| **Enable IPDS** | Specify **ENABLED.**<br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |
| **Local LU Name** | **Note:** For the 3130 Release 2, Local LU name entered at the printer must not match the Remote LU Name entered at the printer, and must not match the control point name entered at the printer. |
| **Solicit SSCP** | This parameter should be set to **YES** except for OS/400 V2R2 and V2R3 environments. |

## VTAM LOGMODE Table (Local 3174)

Figure 41 shows a sample VTAM LOGMODE Table (modetab) for a 3174 token-ring attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
IBM3935  MODEENT LOGMODE=IBM3935,FMPROF=X'13',TSPROF=X'07',            X
               PRIPROT=X'B0',SECPROT=X'B0',                            X
               COMPROT=X'D0B1',RUSIZES=X'8787',                        X
               PSERVIC=X'060200000000000000002000',                    X
               PSNDPAC=X'03',SRCVPAC=X'03',                            X
               SSNDPAC=X'00'
*
```

*Figure 41. VTAM LOGMODE (Partial, Local 3174)*

| Field | Notes |
|---|---|
| **LOGMODE** | The value you specify for LOGMODE must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The name on the DLOGMOD parameter in the VTAM Major Node definition. |
| **RUSIZES** | For maximum performance, specify **X'8787'** |

## VTAM Local Major Node (3174)

Figure 42 shows a sample node definition when the Call Type attachment parameter is set to **Call**.

**Notes:**

1. Setting Call Type to **Listen** is not recommended; however, if you do, you need to delete the LOGAPPL statement.
2. Highlighted values are required or recommended, or they must match another configuration value.

```
CHAN2E0  VBUILD TYPE=LOCAL
*
PU3174   PU    CUADDR=2E0,                  ADDRESS OF 3174   ....    X
               ISTATUS=ACTIVE,              FORCE ACTIVE ....         X
               SECNET=NO,                                             X
               DISCNT=NO,                                             X
               PUTYPE=2,                                              X
               MAXBFRU=26
*
PU3935   PU    CUADDR=2E5,                  COULD BE ANYTHING ....    X
               MODETAB=MODEIBM,             NAME OF LOADLIB  ...      X
               PACING=0,                    NO PACING                 X
               VPACING=0,                   NO PACING                 X
               SSCPFM=USSSCS,               CHARACTER CODED LUS       X
               PUTYPE=2,                    TIC ==> PU TYPE 2         X
               MAXPATH=1,                   NUMBER OF DIFFERENT TICS  X
               DELAY=0,                                               X
               MAXBFRU=5                                              X
*
LU3935   LU    LOCADDR=1,                LU FOR TOKEN-RING TO 3935    X
               DLOGMOD=IBM3935,               LOG MODE TABLE         X
               LOGAPPL=PSFFSA1
```

*Figure 42. VTAM Node Definition*

| Field | Notes |
|---|---|
| **DELAY** | **0** is recommended for better performance. |
| **MAXBFRU** | **5** is recommended for better performance. |
| **LU name** | This value must match:<br>• The value on the LUNAME statement in the PSF Startup Procedure<br>• The Local LU Name parameter in the token-ring attachment configuration. |
| **LOCADDR** | This value must match the Local LU Address parameter in the token-ring attachment configuration. |
| **DLOGMOD** | This value must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The value you specify on the LOGMODE parameter of the MODEENT statement in the VTAM LOGMODE table. |
| **LOGAPPL** | LOGAPPL must match the VTAM APPLID.<br>**Note:** For 3130 Release 2, when using printer sharing, do not use the LOGAPPL=APPLID parameter on the LU Statements. |

## Local 3174 Configuration

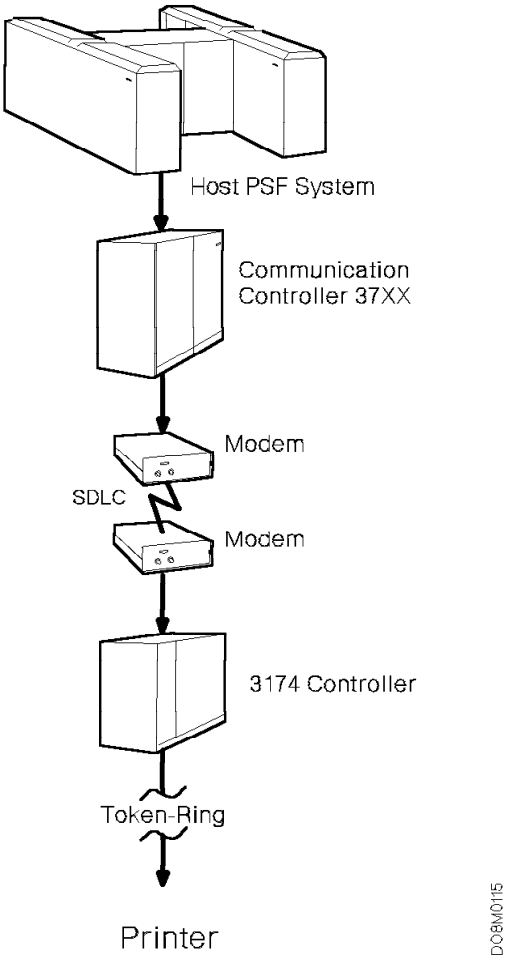
You will usually need to reconfigure the 3174 to attach to the printer. Please use the worksheets in the appropriate 3174 Configuration Planning Guide to complete the configuration. Figure 43 shows the Prompts that need to be answered (prompts that use default values are not shown):

```
PROMPT Number
             100       11L       Model of 3174
             101       5         SNA type of 3174
             104       E0        Start 370 address of 3174
             105       EF        End 370 address of 3174
             150       1 0       Token-Ring Network gateway Controller
             173       10100000  DFT options could be Default
             175       111111
             220       3         Alert/CMIP Event Report Function
             222       1         Support Command Retry
             224       3         Mode of data transfer
             900       400015000001   3174 BASE address/GatewaySAP
             908                 Anything
             911       1  Token-Ring Speed (0=4Mb 1=16Mb)
             920                 Anything
             940       This screen comes up as an grid
                       S     Ring address  SAP  T
                       E0    400015000001  04   1
                       E1    4000200000E1  04   1
                       E2    4000200000E2  04   1
                       E3    4000200000E3  04   1
                       E4    4000200000E4  04   1
                       E5    4000200000E5  04   1
                       Continues for 16 addresses. The last one is
                       the only one needed for this example.
             941       This screen comes up as an grid
                       S     Ring address SAP    F  W
                       E0    400015000001  04    2  4
                       E1    4000200000E1  04    2  4
                       E2    4000200000E2  04    2  4
                       E3    4000200000E3  04    2  4
                       E4    4000200000E4  04    2  4
                       E5    4000200000E5  04    2  4
```

*Figure 43. Sample 3174 Configuration*

| Field | Notes |
|---|---|
| **Item 900** | The value you specify on item 900 must match the Remote Address parameter in the token-ring attachment configuration. |
| **Item 911** | The value you specify on item 911 must match the Ring Speed parameter in the token-ring attachment configuration. |
| **Item 940, Item 941** | The address of the ring you attach the printer to (in this example, 4000 2000 00E5) must match the address on the Alternate Address parameter in the token-ring attachment configuration.<br><br>The address of the host token-ring adapter card (in this example, 4000 1500 0001) must match the address on the Remote Address parameter in the token-ring attachment configuration.<br><br>For Prompt 940, the T represents the type of device and must be set to **1**.<br><br>For Prompt 941:<br><br>• The value listed under F represents the maximum size RU that the 3174 will handle (where 2=2048). The value for F must be set to 2 or greater.<br><br>• The W represents how many frames will be sent before validation is done. |

# Chapter 10. Remote 3174 Token-Ring Attachment




*Remote 3174 Token-Ring Attachment*. Note that the modems and leased line can be replaced by a modem eliminator.

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and remote 3174 token-ring attachment:

**Tasks described in this chapter:**

- Complete the worksheet for your printer.
- Update the NCP. See “ACF/NCP (Remote 3174)” on page 133.
- Update the VTAM LOGMODE table. See “VTAM LOGMODE Table (Remote 3174)” on page 135.
- Update the 3174 Configuration. See “Remote 3174 Configuration” on page 136.

**Tasks described in other chapters:**

- Update the MVS printer definitions (this applies only when your host system is MVS). See “MVS Printer Definitions” on page 106.
- Update the startup procedure for your host system:
  - “PSF/MVS Startup Procedure” on page 107
  - “PSF/VSE Startup Procedure” on page 109
  - “PSF/VM PDM Definition” on page 110
- Update the following VTAM definitions, including:
  - “Member ATCCON00” on page 111
  - “VTAM APPLID” on page 111
  - “ATCSTR00 Data Set” on page 112

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

## Remote 3174 Token-Ring Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- The **Acceptable Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

→ The lower part of the worksheet lists configuration parameters that do not correspond to attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the host environment is set up properly for the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 23. Token-Ring SNA - Remote 3174 Attachment Configuration Worksheet*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM and NCP Definitions | 3174 Configuration | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| Installed | | | | | Yes or No | **Yes** |
| XID Number | | | | | 07100000 to FFFFFFFF | **071** |
| Remote Network Name | | | | | Up to 8 characters | |
| SNA Intervention Timer | | | | | 0 to 99 (minutes) | |
| Local LU Name | | LUNAME | Name of LU (NCP) | | Up to 8 characters | |
| Remote LU Name | | APPLID | APPLID | | Up to 8 characters | |
| Mode Name | | | | | | **null (blank)** |
| Remote Address | | | | Items 900, 940, 941 | 400000000000 to 7FFFFFFFFFFF | |
| Local Network Name[2] | | | | | Up to 8 characters | |
| Control Point Name[2] | | APPLID | APPLID | | Up to 8 characters | |
| Alternate Address | | | | Items 940, 941 | 400000000000 to 7FFFFFFFFFFF | |
| Ring Speed (Mbps) | | | | Item 911 | 4 or 16 | |
| SSCP ID | | | SSCPID (ATCSTR00) | | 0000 to FFFF | |
| Local LU Address | | | LOCADDR (NCP) | | 0 to 255 | |
| Call Type | | | | | Call or Listen | |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | | |
| | PROC(JES2), JNAME(JES3), PNAME(JES3) | PROC name (MVS only) | | | | |
| | | LOGMODE | LOGMODE (LOGMODE table) DLOGMOD (NCP) | | | |
| | | | LOGAPPL (NCP) APPLID | | | |
| | | | MAXDATA (NCP) | | | **521** |
| | | | RUSIZES (LOGMODE table) | | | **X′8787′** |

**Notes:**

1. Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9.
2. If you specify a Local Network Name, you must also specify a Control Point Name.

*Table 24 (Page 1 of 2). Token-Ring SNA - Remote 3174 Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM and NCP Definitions | 3174 Configuration | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Protocols | | | | | | |
| Enable SNA | | | | | Enable or Disable | **Enable** |
| Enable TCP/IP | | | | | Enable or Disable | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> Address | | | | | | |
| Alternate Address | | | | Items 940, 941 | 400000000000 to 7FFFFFFFFFFF | |
| MAC Address | | | | | | Display Only |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration | | | | | | |
| Auto Start | | | | | Yes or No | |
| Ring Speed (Mbps) | | | | Item 911 | 4 or 16 | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> SNA | | | | | | |
| XID Number | | | | | 071 to FFFFFFFF | **071** |
| Remote Network Name | | | | | Up to 8 characters | |
| SNA Intervention Timer | | | | | 0 to 99 (Minutes) | |
| Local LU Name | | LUNAME | Name of LU (NCP) | | Up to 8 characters | |
| Remote LU Name | | APPLID | APPLID | | Up to 8 characters | |
| Mode Name | | | | | | **null (blank)** |
| Remote Address | | | | Items 900, 940, 941 | 400000000000 to 7FFFFFFFFFFF | |
| Local Network Name[2] | | | | | Up to 8 characters | |
| Control Point Name[2] | | | | | Up to 8 characters | |
| SSCP ID | | | SSCPID (ATCSTR00) | | 0000 to FFFF | |
| Local LU Address | | | LOCADDR (NCP) | | 0 to 255 | |
| Call Type | | | | | Call or Listen | |
| Solicit SSCP | | | | | Yes or No | **YES** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | | |
| Source Attachment | | | | | | **SNA TOKEN RING** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | | |
| Enable IPDS | | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | | |
| | PROC(JES2), JNAME(JES3), PNAME(JES3) | PROC name (MVS only) | | | | |

*Table 24 (Page 2 of 2). Token-Ring SNA - Remote 3174 Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM and NCP Definitions | 3174 Configuration | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | | LOGMODE | LOGMODE (LOGMODE table)<br>DLOGMOD (NCP) | | | |
| | | | LOGAPPL (NCP)<br>APPLID | | | |
| | | | MAXDATA (NCP) | | | **521** |
| | | | RUSIZES (LOGMODE table) | | | **X'8787'** |

**Notes:**

1. Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9.
2. If you specify a Local Network Name, you must also specify a Control Point Name.

## Remote 3174 Token-Ring Attachment Configuration

Figure 44 shows a sample configuration for a remote 3174 token-ring attachment. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 132 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
XID number:                 7100000
Remote network name:        USIBMBQ
SNA Intervention Timer:     99
Local LU name:              LU3935
Remote LU name:             PSFFSA1
Mode name:
Remote address:             400015000001
Local network name:         USIBMBQ
Control point name:         PSFFSA1
Alternate address:          4000317480D8
Ring speed:                 16
SSCP ID:                    0000
Local LU address:           1
Call Type:                  Call
```

*Figure 44. Remote 3174 Token-Ring Attachment Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Install Status** | Specify **Yes**. |
| **XID Number** | An ID that distinguishes a specific piece of equipment from all other similar pieces of equipment on the network. |
| **Remote Network Name** | The name of the network that the host belongs to. This value is ignored. |
| **SNA Intervention Timer** | This timer defines how many minutes the printer waits before notifying the host that an attachment is not operating. The delay provides time to fix the problem at the printer without having an alert sent to the host. The timer can be set from 0 to 98 minutes. To turn the timer off, specify 99.<br><br>**Note:** IBM recommends that you set the SNA Intervention Timer in the printer configuration to off for printer sharing. If not, other writers can print their jobs before the original writer can get back to finish the job that had an intervention that caused the SNA Intervention Timer to expire. |
| **Local LU Name** | The name of the local logical unit. The value you specify for Local LU Name must match:<br>• The value on the LUNAME statement in the PSF Startup Procedure (see topic 106).<br>• The name on the LU statement in the NCP (see topic 133). |

| Printer Attachment Parameter | Notes |
|---|---|
| **Remote LU Name** | The name of the remote logical unit. The value you specify for Remote Local LU Name must match:<br>• The VTAM APPLID (see topic 111).<br>• The APPLID in the PSF Startup Procedure (see topic 106). |
| **Mode Name** | Mode name should be null (blank). |
| **Remote Address** | The remote host token-ring adapter card address. The value you specify for Remote Address must match the remote host token-ring adapter card address you specify for Items 900, 940, and 941 in the 3174 Configuration (see topic 123). |
| **Local Network Name** | The name of the network the printer is attached to. This value is ignored. |
| **Control Point Name** | The printer control point name. The Control Point Name must be a unique address on the token ring.<br>**For printers other than the 3130 Release 2**, you can specify the control point name in the attachment configuration, or in a VTAM definition. If you specify Control Point Name in the attachment configuration, it must match:<br>• The VTAM APPLID (see topic 111).<br>• The APPLID in the PSF Startup Procedure (see topic 106).<br>**For the 3130 Release 2**, Control Point Name is not used; however, it must not be blank and it must not match the APPLID. Instead, specify a unique value such as PRT1 or PRT2. |
| **Alternate Address** | Sets the LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. The value you specify for Alternate Address must match the LAN adapter unique address you specify for Items 940 and 941 in the 3174 Configuration (see topic 136). |
| **Ring Speed** | The ring speed of the network the adapter is attached to. The value you specify for Ring Speed must correspond to Item 82 in the 3174 Configuration (see topic 136). Specifying the wrong value can cause the network to stop operating. |
| **SSCP ID** | Specifies the ID of the controlling system services control point in the SNA network. Although the SSCP Identifier is 12 digits, you specify only the last four digits in the attachment configuration. The printer automatically sets the first eight digits to 0500 0000.<br>This value must be the hexadecimal equivalent of the decimal value on the SSCPID statement in the ATCSTR00 data set (see topic 112).<br>The printer uses this ID to send information to the host system's Netview Programs. If the host does not use Netview, or the SNA Intervention Timer is set to 99, set SSCP ID to **0**. |
| **Local LU Address** | The destination address used by other systems to send information to the local logical unit. The value you specify for Local LU Address must match the LOCADDR parameter on the LU statement in the NCP (see topic 133). |

| Printer Attachment Parameter | Notes |
|---|---|
| **Call Type** | Specifies how the host and printer make contact. There are two settings: Call and Listen.<br>• If you set Call Type to **Call**, the printer initiates contact with the host. The LOGAPPL statement in the NCP definition (see topic 133) must specify the VTAM APPLID (see topic 111).<br>**Note:** For 3130 Release 2, when using printer sharing, do not use the LOGAPPL=APPLID parameter on the LU statements.<br>With Call Type=Call, if the SDLC line from the host goes down, then the printer will disable in two minutes. When the SDLC line is up again, the printer can then be re-enabled.<br>• If you set Call Type to **Listen**, the printer waits, or "listens," for calls from the host. The last twelve digits on the DIALNO statement in the NCP definition must match the value you specify for Alternate Address.<br>With Call Type=Listen, anytime the printer is disabled, started, or shutdown, then PU and LU must be varied inactive then active again to re-establish connection to the host. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Enable SNA** | Specifies whether the token ring is enabled or disabled for SNA. Specify **Enabled** (the default value). |
| **Enable TCP/IP** | Specifies whether the token ring is enabled or disabled for TCP/IP. The default is **Enabled**. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. You can use the MAC address for the printer's alternate address. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **SNA Token Ring**. |
| **Enable IPDS** | Specify **ENABLED.**<br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |
| **Local LU Name** | **Note:** For the 3130 Release 2, Local LU name entered at the printer must not match the Remote LU Name entered at the printer, and must not match the control point name entered at the printer. |
| **Solicit SSCP** | This parameter should be set to **YES** except for OS/400 V2R2 and V2R3 environments. |

## ACF/NCP (Remote 3174)

Figure 45 shows a sample ACF/NCP Definition when the Call Type attachment parameter is set to **Call**.

**Notes:**

1. Setting Call Type to **Listen** is not recommended; however, if you do, you need to delete the LOGAPPL statement.
2. Highlighted values are required or recommended, or they must match another configuration value.

```
*********************************************************************
**      REMOTE TOKEN-RING ON 37XX CCU
*
GRPPRT   GROUP DIAL=NO,                                              +
               LNCTL=SDLC,                  SYNCHRONOUS DATA LINK    +
               REPLYTO=1,                   1 SECOND FOR SDLC        +
               TYPE=NCP
*********************************************************************
**      LINE ADDRESS 012 - 3174 REMOTE WITH GATEWAY FEATURE
LN012    LINE  ADDRESS=(012,HALF),          LINE INTERFACE ADDRESS   +
               CLOCKING=EXT,                MODEM PROVIDES CLOCKING  +
               DUPLEX=FULL,                 SET DUPLEX FULL          +
               RETRIES=(5,1,2),             NUMBER OF RETRIES        +
               SPEED=56000,                 SPEED DETERMINED BY MODEM
*********************************************************************
*
         SERVICE ORDER=(PU3935)
*
*********************************************************************
**      3174 REMOTE CUSTOMIZATION PROMPT 941 'E0' IS GATEWAY
PU3174   PU    ADDR=E0,                                              +
               MAXDATA=521,                                          +
               MAXOUT=7,                                             +
               PUTYPE=2,                                             +
               PASSLIM=7,                                            +
               ISTATUS=INACTIVE
*********************************************************************
**      3174 REMOTE CUSTOMIZATION PROMPT 941 'E5' IS 3935 T/R ADDRESS
PU3935   PU    ADDR=E5,                                              +
               MAXDATA=521,                                          +
               MAXOUT=7,                                             +
               PUTYPE=2,                                             +
               PASSLIM=7,                                            +
               ISTATUS=INACTIVE
*      DEPENDENT LU DEFINITION
LU3935    LU   LOCADDR=1,                                           +
               MODETAB=MODEIBM,                                      +
               DLOGMOD=IBM3935,                                    +
               LOGAPPL=PSFFSA1
*
```

*Figure 45. Sample ACF/NCP Definition*

| Field | Notes |
|---|---|
| **SPEED** | Specify **56000** for V.35, specify **19200** for V.24. |
| **MAXDATA** | Specify **521**. |
| **LU name** | The name on the LU statement (LU3935 in the example) must match:<br>• The Local LU Name parameter in the token-ring attachment configuration.<br>• The value on the LUNAME statement in the PSF Startup Procedure. |
| **LOCADDR** | The value you specify for LOCADDR must match the Local LU Address parameter in the token-ring attachment configuration. |
| **DLOGMOD** | The value you specify DLOGMOD must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The LOGMODE parameter on the MODEENT statement in the VTAM LOGMODE table. |
| **LOGAPPL** | LOGAPPL displays only for Call Type=Call. LOGAPPL must match the APPLID.<br>**Note:** For 3130 Release 2, when using printer sharing, do not use the LOGAPPL=APPLID parameter on the LU statements. |

## VTAM LOGMODE Table (Remote 3174)

Figure 46 shows a sample VTAM LOGMODE Table (modetab) for a remote 3174 token-ring attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
IBM3935  MODEENT LOGMODE=IBM3935,FMPROF=X'13',TSPROF=X'07',            X
               PRIPROT=X'B0',SECPROT=X'B0',                            X
               COMPROT=X'D0B1',RUSIZES=X'8686',                        X
               PSERVIC=X'060200000000000000002000',                    X
               PSNDPAC=X'03',SRCVPAC=X'03',                            X
               SSNDPAC=X'00'
*
```

*Figure 46. VTAM LOGMODE (Partial, Remote 3174)*

| Field | Notes |
|---|---|
| **LOGMODE** | The value you specify for LOGMODE must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The name on the DLOGMOD parameter in the NCP definition. |
| **RUSIZES** | For maximum performance, specify **X'8686'** |

## Remote 3174 Configuration

You will usually need to reconfigure the 3174 to attach to the printer. Please use the worksheets in the appropriate 3174 Configuration Planning Guide to complete the configuration. Figure 47 shows the Prompts that need to be answered (prompts that use default values are not shown):

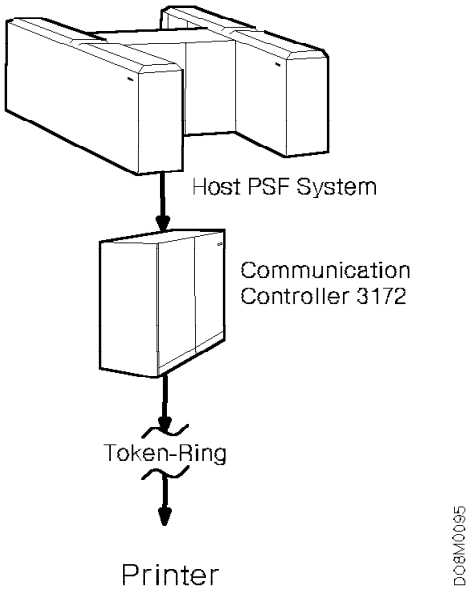
```
PROMPT Number
             100       21R       Model of 3174
             101       2         SNA type of 3174
             102       1         Token Ring
              80       400015000001 3174 Token Ring Address
              82       2         Token Ring Speed (0=4Mb, 2=16Mb)
             104       D4        Start 370 address of 3174
             105       D8        End 370 address of 3174
             108                 Serial number of 3174
             121       01        US English
             123       0         No CECP Support
             150       1 0       LAN and ISDN
             310       0         non-switched line
             313       1         NRZI
             317       0         nonswitched
             318       0         full speed transmission
             340       0         controlled request to send
             370       1         521 byte Max Frame size
             900       400015000001     3174  BASE ring address
             905       1
             908       IBMLAN
             912       00
             940       This screen comes up as an grid
                       S     Ring address  SAP  T
                       D4    400015000001  04   0
                       D5    4000317480D5  04   0
                       D6    4000317580D6  04   0
                       D7    4000317480D7  04   0
                       D8    4000317480D8  04   0
                       Continues for 16 addresses. The last one is
                       the only one needed for this example.
             941       This screen comes up as an grid
                       S     Ring address  SAP  F  W
                       D4    400015000001  04   1  7
                       D5    4000317480D5  04   1  7
                       D6    4000317580D6  04   1  7
                       D7    4000317480D7  04   1  7
                       D8    4000317480D8  04   1  7
                       Continues for 16 addresses. The last one is
                       the only one needed for this example.
```

*Figure 47. Sample Remote 3174 Configuration*

| Field | Notes |
|---|---|
| **Item 900, Item 80** | The value you specify on items 900 and 80 must match the Remote Address parameter in the token-ring attachment configuration. |
| **Item 82** | The value you specify on item 82 must correspond the Ring Speed parameter in the token-ring attachment configuration. |

| Field | Notes |
|---|---|
| **Item 940, Item 941** | The address of the ring you attach the printer to (in this example, 4000 3174 80D8) must match the address on the Alternate Address parameter in the token-ring attachment configuration.<br><br>The address of the host token-ring adapter card (in this example, 4000 1500 0001) must match the address on the Remote Address parameter in the token-ring attachment configuration.<br><br>For Prompt 940, the T represents the type of device and must be set to **1**.<br><br>For Prompt 941:<br><br>• The value listed under F represents the maximum size RU that the 3174 will handle (where 1=1024).<br><br>• The W represents how many frames will be sent before validation is done. |

# Chapter 11. 3172 Token-Ring Attachment




*3172 Token-Ring Attachment*

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and 3172 token-ring attachment;

**Tasks described in this chapter:**

- Complete the worksheet for your printer.
- Update the VTAM LOGMODE table. See "VTAM LOGMODE Table (3172)" on page 147.
- Update the VTAM Major Node definition. See "VTAM Switched Major Node Definition (3172)" on page 148.

**Tasks described in other chapters:**

- Update the MVS printer definitions (this applies only when your host system is MVS). See "MVS Printer Definitions" on page 106.
- Update the startup procedure for your host system:
  - "PSF/MVS Startup Procedure" on page 107
  - "PSF/VSE Startup Procedure" on page 109
  - "PSF/VM PDM Definition" on page 110
- Update the following VTAM definitions, including:
  - "Member ATCCON00" on page 111
  - "VTAM APPLID" on page 111
  - "ATCSTR00 Data Set" on page 112

**Tasks described in other books:**

- Configure the 3172. See the 3172 configuration documentation for more information.

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

## 3172 Token-Ring Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- The **Acceptable Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

→ The lower part of the worksheet lists configuration parameters that do not correspond to attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the host environment is set up properly for the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 25. Token-Ring SNA - Local 3172 Attachment Configuration Worksheet*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM Definitions | Acceptable Values | Value to Use |
|---|---|---|---|---|---|
| Installed | | | | Yes or No | **Yes** |
| XID Number | | | IDBLK, IDNUM (Major Node) | 07100000 to FFFFFFFF | **071**_____ |
| Remote Network Name | SYSTEM, JUNIT | | NETID (ATCSTR00) | Up to 8 characters | |
| SNA Intervention Timer | | | | 0 to 99 (Minutes) | |
| Local LU Name | | LUNAME | Name of LU (Major Node) | Up to 8 characters | |
| Remote LU Name | | APPLID | APPLID | Up to 8 characters | |
| Mode Name | | | | | **null (blank)** |
| Remote Address | | | | 400000000000 to 7FFFFFFFFFF | |
| Local Network Name[3] | | | | Up to 8 characters | |
| Control Point Name[3] | | APPLID | APPLID | Up to 8 characters | |
| Alternate Address | | | DIALNO (Major Node) | 400000000000 to 7FFFFFFFFFF | **null (blank)** if Call Type=Call |
| Ring Speed (Mbps) | | | | 4 or 16 | |
| SSCP ID | | | SSCPID (ATCSTR00) | 0000 to FFFF | |
| Local LU Address | | | LOCADDR (Major Node) | 0 to 255 | |
| Call Type | | | | Call or Listen | |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | |
| | PROC(JES2), JNAME(JES3), PNAME(JES3) | PROC name (MVS only) | | | |
| | | LOGMODE | LOGMODE (LOGMODE table) DLOGMOD (Major Node) | | |
| | | | CALL (Major Node) | | **INOUT** |
| | | | DIAL (Major Node) | | **YES** |
| | | | LOGAPPL (Major Node) APPLID | | |
| | | | MAXDATA (Major Node) | | **1033** |
| | | | RUSIZES (LOGMODE table) | | **X'8787'** |

**Notes:**

1. Names can be one to eight characters. 0–9, A – Z, $, #, and @ are permitted, but the first character cannot be 0–9.
2. The Remote Address and Ring Speed parameters must match the appropriate values in the 3172 configuration. See the 3172 configuration documentation for more information.
3. If you specify a Local Network Name, you must also specify a Control Point Name.

*Table 26 (Page 1 of 2). Token-Ring SNA - Local 3172 Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM Definitions | Acceptable Values | Value to Use |
|---|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Protocols | | | | | |
| Enable SNA | | | | Enable or Disable | **Enable** |
| Enable TCP/IP | | | | Enable or Disable | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> Address | | | | | |
| Alternate Address | | | DIALNO (Major Node) | 400000000000 to 7FFFFFFFFFFF | **null (blank)** if Call Type=Call |
| MAC Address | | | | | Display Only |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration | | | | | |
| Auto start | | | | Yes or No | |
| Ring Speed (Mbps) | | | | 4 or 16 | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> SNA | | | | | |
| XID Number | | | IDBLK, IDNUM (Major Node) | 07100000 to FFFFFFFF | **071**_____ |
| Remote Network Name | SYSTEM, JUNIT | | NETID (ATCSTR00) | Up to 8 characters | |
| SNA Intervention Timer | | | | 0 to 99 (Minutes) | |
| Local LU Name | | LUNAME | Name of LU (Major Node) | Up to 8 characters | |
| Remote LU Name | | APPLID | APPLID | Up to 8 characters | |
| Mode Name | | | | | **null (blank)** |
| Remote Address | | | | 400000000000 to 7FFFFFFFFFFF | |
| Local Network Name[3] | | | | Up to 8 characters | |
| Control Point Name[3] | | | CPNAME (Major Node) | Up to 8 characters | |
| SSCP ID | | | SSCPID (ATCSTR00) | 0000 to FFFF | |
| Local LU Address | | | LOCADDR (Major Node) | 0 to 255 | |
| Call Type | | | | Call or Listen | |
| Solicit SSCP | | | | Yes or No | **YES** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | |
| Source Attachment | | | | | **SNA TOKEN RING** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | |
| Enable IPDS | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | |
| | PROC(JES2), JNAME(JES3), PNAME(JES3) | PROC name (MVS only) | | | |

*Table 26 (Page 2 of 2). Token-Ring SNA - Local 3172 Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM Definitions | Acceptable Values | Value to Use |
|---|---|---|---|---|---|
| | | LOGMODE | LOGMODE (LOGMODE table)<br>DLOGMOD (Major Node) | | |
| | | | CALL (Major Node) | | **INOUT** |
| | | | DIAL (Major Node) | | **YES** |
| | | | LOGAPPL (Major Node)<br>APPLID | | |
| | | | MAXDATA (Major Node) | | **1033** |
| | | | RUSIZES (LOGMODE table) | | **X'8787'** |

**Notes:**

1. Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9.
2. The Remote Address and Ring Speed parameters must match the appropriate values in the 3172 configuration. See the 3172 configuration documentation for more information.
3. If you specify a Local Network Name, you must also specify a Control Point Name.

## 3172 Token-Ring Attachment Configuration

Figure 48 shows a sample configuration for a 3172 token-ring attachment. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 146 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
XID number:                 7100021
Remote network name:        USIBMBQ
SNA Intervention Timer:     99
Local LU name:              LU3935
Remote LU name:             PSFFSA1
Mode name:
Remote address:             400010150003
Local network name:         USIBMBQ
Control point name:         PSFFSA1
Alternate address:          400020050089
Ring speed:                 16
SSCP ID:                    0000
Local LU address:           1
Call Type:                  Call
```

*Figure 48. 3172 Token-Ring Attachment Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Install Status** | Specify **Yes**. |
| **XID Number** | An ID that distinguishes a specific piece of equipment from all other similar pieces of equipment on the network.<br><br>The first three digits must be **071** and must match the IDBLK value in the VTAM Major Node Definition (see topic 148). The last five digits must match the IDNUM value in the VTAM Major Node Definition. |
| **Remote Network Name** | The name of the network that the host belongs to. The value you specify for Remote Network Name must match:<br><br>• The NETID parameter in the ATCSTR00 data set (see topic 112).<br>• The SYSTEM parameter on the JES3 printer definition FSSDEF statement (see topic 106).<br>• The JUNIT parameter on the JES3 printer definition DEVICE statement (see topic 106). |
| **SNA Intervention Timer** | This timer defines how many minutes the printer waits before notifying the host that an attachment is not operating. The delay provides time to fix the problem at the printer without having an alert sent to the host. The timer can be set from 0 to 98 minutes. To turn the timer off, specify 99.<br><br>**Note:** IBM recommends that you set the SNA Intervention Timer in the printer configuration to **off** for printer sharing. If not, other writers can print their jobs before the original writer can get back to finish the job that had an intervention that caused the SNA Intervention Timer to expire. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Local LU Name** | The name of the local logical unit. The value you specify for Local LU Name must match:<br>• The name on the LU statement in the VTAM Major Node definition (see topic 148).<br>• The value on the LUNAME statement in the PSF Startup Procedure (see topic 106). |
| **Remote LU Name** | The name of the remote logical unit. The value you specify for Remote LU Name must match:<br>• The VTAM APPLID (see topic 111).<br>• The APPLID in the PSF Startup Procedure (see topic 106). |
| **Mode Name** | Mode name should be null (blank). |
| **Remote Address** | The remote host token-ring adapter card address. The value you specify for Remote Address must match the corresponding value in the 3172 configuration. |
| **Local Network Name** | The name of the network the printer is attached to. If the printer and the host are in the same network, the Local Network Name should be the same as the Remote Network Name. |
| **Control Point Name** | The printer control point name. The Control Point Name must be a unique name on the token ring.<br>**For printers other than the 3130 Release 2**, you can specify the control point name in the attachment configuration, or in a VTAM definition. If you specify Control Point Name in the attachment configuration, it must match:<br>• The VTAM APPLID (see topic 111).<br>• The APPLID in the PSF Startup Procedure (see topic 106).<br>**For the 3130 Release 2**, Control Point Name should match the CPNAME value in the VTAM Major Node definition (see topic 148). |
| **Alternate Address** | Sets the LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. If you set the Call Type parameter to Listen, the value you specify for Alternate Address must match the last twelve digits of the DIALNO value on the PATH statement in the VTAM Major Node definition (see topic 148). |
| **Ring Speed** | The ring speed of the network the adapter is attached to. The value you specify for Ring Speed must match the corresponding value in the 3172 configuration. Specifying the wrong value can cause the network to stop operating. |
| **SSCP ID** | Specifies the ID of the controlling system services control point in the SNA network. Although the SSCP Identifier is 12 digits, you specify only the last four digits in the attachment configuration. The printer automatically sets the first eight digits to 0500 0000.<br>This value must be the hexadecimal equivalent of the decimal value on the SSCPID statement in the ATCSTR00 data set (see topic 112).<br>The printer uses this ID to send information to the host system's Netview Programs. If the host does not use Netview, or the SNA Intervention Timer is set to 99, set SSCP ID to **0**. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Local LU Address** | The destination address used by other systems to send information to the local logical unit. The value you specify for Local LU Address must match the LOCADDR parameter on the LU statement in the VTAM Major Node definition (see topic 148). |
| **Call Type** | Specifies how the host and printer make contact. There are two settings: Call and Listen.<br>• If you set Call Type to **Call**, the printer initiates contact with the host. The LOGAPPL statement in the VTAM Major Node definition (see topic 148) must specify the VTAM APPLID (see topic 111).<br>**Note:** For 3130 Release 2, when using printer sharing, do not use the LOGAPPL=APPLID parameter on the LU statements.<br>• If you set Call Type to **Listen**, the printer waits, or "listens," for calls from the host. The last twelve digits on the DIALNO statement in the VTAM Major Node definition (see topic 148) must match the value you specify for Alternate Address. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Enable SNA** | Specifies whether the token ring is enabled or disabled for SNA. Specify **Enabled** (the default value). |
| **Enable TCP/IP** | Specifies whether the token ring is enabled or disabled for TCP/IP. The default is **Enabled**. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. You can use the MAC address for the printer's alternate address. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **SNA Token Ring**. |
| **Enable IPDS** | Specify **ENABLED.**<br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |
| **Local LU Name** | **Note:** For the 3130 Release 2, Local LU name entered at the printer must not match the Remote LU Name entered at the printer, and must not match the control point name entered at the printer. |
| **Solicit SSCP** | This parameter should be set to **YES** except for OS/400 V2R2 and V2R3 environments. |

## VTAM LOGMODE Table (3172)

Figure 49 shows a sample VTAM LOGMODE Table for a 3172 token-ring attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
IBM3935  MODEENT LOGMODE=IBM3935,FMPROF=X'13',TSPROF=X'07',            X
               PRIPROT=X'B0',SECPROT=X'B0',                            X
               COMPROT=X'D0B1',RUSIZES=X'8787',                        X
               PSERVIC=X'060200000000000000002000',                    X
               PSNDPAC=X'03',SRCVPAC=X'03',                            X
               SSNDPAC=X'00'
*
```

*Figure 49. VTAM LOGMODE (Partial, 3172)*

| Field | Notes |
|---|---|
| **LOGMODE** | The value you specify for LOGMODE must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The name on the DLOGMOD parameter in the VTAM Major Node definition. |
| **RUSIZES** | For maximum performance, specify **X'8787'** |

## VTAM Switched Major Node Definition (3172)

This section shows two sample definitions:

- Figure 50 shows a sample node definition for Call Type=Listen.
- Figure 51 on page 149 shows a sample node definition for Call Type=Call.

The primary difference between the two definitions is that the Call Type=Listen definition includes a DIALNO statement, whereas the Call Type=Call definition includes a LOGAPPL statement. In both figures, highlighted values are required or recommended, or they must match another configuration value.

```
MTRG3172 VBUILD TYPE=XCA
*
PU3172   PORT  CUADDR=5EC,                  ADDRESS OF 3172C  ....    X
               DELAY=0,
               ADAPNO=1,                   RELATIVE ADAPTOR NUMBER   X
               MEDIUM=RING,                TYPE OF LAN SUPPORT       X
               SAPADDR=4,                  SAP ADDRESS               X
               TIMER=60
*
GRP3172  GROUP DIAL=YES,                   TYPE OF SUPPORT           X
               CALL=INOUT,                 IN OR OUT DEVICES         X
               AUTOGEN=(1,L,P)             Auto Makes 1 each PU & LU

************************************************************************

CTRG3172 VBUILD TYPE=SWNET,MAXGRP=1,MAXNO=1
*
PU3935   PU    ADDR=04,                    COULD BE ANYTHING ....    X
               IDBLK=071,                  5D - OS/2  ; 50 - APPC/PC X
               IDNUM=00021,                FOR PC                    X
               CPNAME=PRT006,              CONTROL POINT NAME        X
               MAXPATH=1,                  NUMBER OF DIFFERENT TICS  X
               VPACING=0,                  NO PACING                 X
               PUTYPE=2,                   TIC ==> PU TYPE 2         X
               SSCPFM=USSSCS,              CHARACTER CODED LUS       X
               MAXDATA=1033,               MAXDATA <= MAXTSL         X
               MODETAB=MODEIBM,            NAME OF LOADLIB  ...      X
               DLOGMOD=IBM3935              LOG MODE TABLE
*
*                      T S
*                      I A
*                      C PTOKEN RING ADDRESS
*                      | ||   | | |
PTH3935  PATH  DIALNO=0004400020050089,   Printer address on ring      X
               GRPNM=GRP3172,              LOGICAL GROUP - TIC 0     X
               GID=5,PID=1                 GROUP AND PATH IDENTIFIER
*
*
LU3935   LU    LOCADDR=1                   LU FOR TOKEN-RING TO 3935
```

*Figure 50. VTAM Node Definition (3172, Call Type=Listen)*

| Field | Notes |
|---|---|
| **DIAL** | This value must be **YES**. |
| **CALL** | This value must be **INOUT**. |
| **IDBLK** | Specify **071**. |

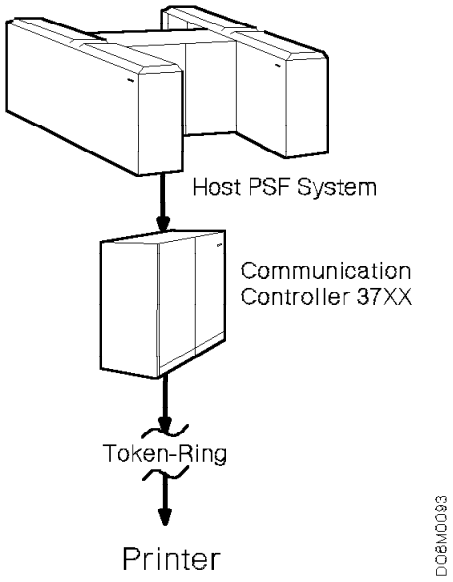
| Field | Notes |
|---|---|
| **IDNUM** | This value must match the last five digits of the XID Number parameter in the token-ring attachment configuration. |
| **CPNAME** | For the 3130 Release 2, this value must match the Control Point Name parameter in the token-ring attachment configuration. |
| **DLOGMOD** | The value you specify for DLOGMOD must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The LOGMODE parameter on the MODEENT statement in the VTAM LOGMODE table. |
| **DIALNO** | The last twelve digits of this value must match the Alternate Address parameter in the token-ring attachment configuration. |
| **LU name** | The LU name (LU3935 in this example) must match:<br>• The value on the LUNAME statement in the PSF Startup Procedure<br>• The Local LU Name parameter in the token-ring attachment configuration. |
| **LOCADDR** | This value must match the Local LU Address parameter in the token-ring attachment configuration. |

```
MTRG3172 VBUILD TYPE=XCA
*
PU3172   PORT  CUADDR=5EC,                  ADDRESS OF 3172C  ....    X
               DELAY=0,
               ADAPNO=1,                    RELATIVE ADAPTOR NUMBER   X
               MEDIUM=RING,                 TYPE OF LAN SUPPORT       X
               SAPADDR=4,                   SAP ADDRESS               X
               TIMER=60
*
GRP3172  GROUP DIAL=YES,                    TYPE OF SUPPORT           X
               CALL=INOUT,                  IN OR OUT DEVICES         X
               AUTOGEN=(1,L,P)              Auto Makes 1 each PU & LU

*********************************************************************

CTRG3172 VBUILD TYPE=SWNET,MAXGRP=1,MAXNO=1
*
PU3935   PU    ADDR=04,                     COULD BE ANYTHING ....    X
               IDBLK=071,                   5D - OS/2  ; 50 - APPC/PC X
               IDNUM=00021,                 FOR PC                    X
               CPNAME=PRT006,               CONTROL POINT NAME        X
               MAXPATH=1,                   NUMBER OF DIFFERENT TICS  X
               VPACING=0,                   NO PACING                 X
               PUTYPE=2,                    TIC ==> PU TYPE 2         X
               SSCPFM=USSSCS,               CHARACTER CODED LUS       X
               MAXDATA=1033,                MAXDATA <= MAXTSL         X
               MODETAB=MODEIBM,             NAME OF LOADLIB  ...      X
               DLOGMOD=IBM3935               LOG MODE TABLE
*
*
LU3935   LU    LOCADDR=1,                LU FOR TOKEN-RING TO 3935
               LOGAPPL=PSFFSA1
```

*Figure 51. VTAM Node Definition (3172, Call Type=Call)*

| Field | Notes |
|---|---|
| **DIAL** | This value must be **YES**. |
| **CALL** | This value must be **INOUT**. |
| **IDBLK** | Specify **071**. |
| **IDNUM** | This value must match the last five digits of the XID Number parameter in the token-ring attachment configuration. |
| **CPNAME** | For the 3130 Release 2, this value must match the Control Point Name parameter in the token-ring attachment configuration. |
| **DLOGMOD** | The value you specify for DLOGMOD must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The LOGMODE parameter on the MODEENT statement in the VTAM LOGMODE table. |
| **LU name** | The LU name (LU3935 in this example) must match:<br>• The value on the LUNAME statement in the PSF Startup Procedure<br>• The Local LU Name parameter in the token-ring attachment configuration. |
| **LOCADDR** | This value must match the Local LU Address parameter in the token-ring attachment configuration. |
| **LOGAPPL** | LOGAPPL must match the name of the VTAM APPLID.<br>**Note:** For 3130 Release 2, when using printer sharing, do not use the LOGAPPL=APPLID parameter on the LU statements. |

# Chapter 12. Local 3745 Token-Ring Attachment




*Local 3745 Token-Ring Attachment*

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and local 3745 token-ring attachment:

**Tasks described in this chapter:**

- Complete the worksheet for your printer.
- Update the VTAM LOGMODE table. See "VTAM LOGMODE Table (Local 3745)" on page 159.
- Update the VTAM Major Node definition. See "VTAM Switched Major Node (Local 3745)" on page 160.
- Update the NCP. See "ACF/NCP (Local 3745)" on page 163.

**Tasks described in other chapters:**

- Update the MVS printer definitions (this applies only when your host system is MVS). See "MVS Printer Definitions" on page 106.
- Update the startup procedure for your host system:
  - "PSF/MVS Startup Procedure" on page 107
  - "PSF/VSE Startup Procedure" on page 109
  - "PSF/VM PDM Definition" on page 110
- Update the following VTAM definitions, including:
  - "Member ATCCON00" on page 111
  - "VTAM APPLID" on page 111
  - "ATCSTR00 Data Set" on page 112

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

## Local 3745 Token-Ring Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- The **Acceptable Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

→ The lower part of the worksheet lists configuration parameters that do not correspond to attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the host environment is set up properly for the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 27. Token-Ring SNA - Local 3745 Attachment Configuration Worksheet*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM Definitions | NCP Definition | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| Installed | | | | | Yes or No | **Yes** |
| XID Number | | | IDBLK, IDNUM (Major Node) | | 07100000 to FFFFFFFF | **071**_____ |
| Remote Network Name | SYSTEM, JUNIT | | NETID (ATCSTR00) | | Up to 8 characters | |
| SNA Intervention Timer | | | | | 0 to 99 (Minutes) | |
| Local LU Name | | LUNAME | Name of LU (Major Node) | | Up to 8 characters | |
| Remote LU Name | | APPLID | APPLID | | Up to 8 characters | |
| Mode Name | | | | | | **null (blank)** |
| Remote Address | | | | LOCADD | 400000000000 to 7FFFFFFFFFFF | |
| Local Network Name[2] | | | | | Up to 8 characters | |
| Control Point Name[2] | | APPLID | APPLID | | Up to 8 characters | |
| Alternate Address | | | DIALNO (Major Node) | | 400000000000 to 7FFFFFFFFFFF | **null (blank)** if Call Type=Call |
| Ring Speed (Mbps) | | | | TRSPEED | 4 or 16 | |
| SSCP ID | | | SSCPID (ATCSTR00) | | 0000 to FFFF | |
| Local LU Address | | | LOCADDR (Major Node) | | 0 to 255 | |
| Call Type | | | | | Call or Listen | |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | | |
| | PROC(JES2), JNAME(JES3), PNAME(JES3) | PROC name (MVS only) | | | | |
| | | LOGMODE | LOGMODE (LOGMODE table) DLOGMOD (Major Node) | | | |
| | | | LOGAPPL (Major Node) APPLID | | | |
| | | | RUSIZES (LOGMODE table) | | | **X'8787'** |
| | | | DIALNO/TIC (Major Node) | PORTADD PHYPORT | | |
| | | | MAXDATA (Major Node) | MAXTSL | | **1033** |

**Notes:**

1. Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9.
2. If you specify a Local Network Name, you must also specify a Control Point Name.

*Table 28 (Page 1 of 2). Token-Ring SNA - Local 3745 Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM Definitions | NCP Definition | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Protocols | | | | | | |
| Enable SNA | | | | | Enable or Disable | **Enable** |
| Enable TCP/IP | | | | | Enable or Disable | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> Address | | | | | | |
| Alternate Address | | | DIALNO (Major Node) | | 400000000000 to 7FFFFFFFFFFF | **null (blank)** if Call Type=Call |
| MAC Address | | | | | | Display Only |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration | | | | | | |
| Auto Start | | | | | Yes or No | |
| Ring Speed (Mbps) | | | | TRSPEED | 4 or 16 | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> SNA | | | | | | |
| XID Number | | | IDBLK, IDNUM (Major Node) | | 07100000 to FFFFFFFF | **071**_____ |
| Remote Network Name | SYSTEM, JUNIT | | NETID (ATCSTR00) | | Up to 8 characters | |
| SNA Intervention Timer | | | | | 0 to 99 (Minutes) | |
| Local LU Name | | LUNAME | Name of LU (Major Node) | | Up to 8 characters | |
| Remote LU Name | | APPLID | APPLID | | Up to 8 characters | |
| Mode Name | | | | | | **null (blank)** |
| Remote Address | | | | LOCADD | 400000000000 to 7FFFFFFFFFFF | |
| Local Network Name[2] | | | | | Up to 8 characters | |
| Control Point Name[2] | | | CPNAME (Major Node) | | Up to 8 characters | |
| SSCP ID | | | SSCPID (ATCSTR00) | | 0000 to FFFF | |
| Local LU Address | | | LOCADDR (Major Node) | | 0 to 255 | |
| Call Type | | | | | Call or Listen | |
| Solicit SSCP | | | | | Yes or No | **YES** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | | |
| Source Attachment | | | | | | **SNA TOKEN RING** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | | |
| Enable IPDS | | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | | |
| | PROC(JES2), JNAME(JES3), PNAME(JES3) | PROC name (MVS only) | | | | |

*Table 28 (Page 2 of 2). Token-Ring SNA - Local 3745 Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM Definitions | NCP Definition | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | | LOGMODE | LOGMODE (LOGMODE table)<br>DLOGMOD (Major Node) | | | |
| | | | LOGAPPL (Major Node)<br>APPLID | | | |
| | | | RUSIZES (LOGMODE table) | | | **X′8787′** |
| | | | DIALNO/TIC (Major Node) | PORTADD<br>PHYPORT | | |
| | | | MAXDATA (Major Node) | MAXTSL | | **1033** |

**Notes:**

1. Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9.
2. If you specify a Local Network Name, you must also specify a Control Point Name.

## Local 3745 Token-Ring Attachment Configuration

Figure 52 shows a sample configuration for a local 3745 token-ring attachment. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 158 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
XID number:                 7100001
Remote network name:        USIBMBQ
SNA Intervention Timer:     99
Local LU name:              LU3935
Remote LU name:             PSFFSA1
Mode name:
Remote address:             400022950000
Local network name:         USIBMBQ
Control point name:         PSFFSA1
Alternate address:          400050050043
Ring speed:                 4
SSCP ID:                    0000
Local LU address:           1
Call Type:                  Call
```

*Figure 52. Local 3745 Token-Ring Attachment Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Install Status** | Specify **Yes**. |
| **XID Number** | An ID that distinguishes a specific piece of equipment from all other similar pieces of equipment on the network.<br><br>The first three digits must be **071** and must match the IDBLK value in the VTAM Major Node Definition (see topic 160). The last five digits must match the IDNUM value in the VTAM Major Node Definition. |
| **Remote Network Name** | The name of the network that the host belongs to. The value you specify for Remote Network Name must match:<br><br>• The NETID parameter in the ATCSTR00 data set (see topic 112).<br>• The SYSTEM parameter on the JES3 printer definition FSSDEF statement (see topic 106).<br>• The JUNIT parameter on the JES3 printer definition DEVICE statement (see topic 106). |
| **SNA Intervention Timer** | This timer defines how many minutes the printer waits before notifying the host that an attachment is not operating. The delay provides time to fix the problem at the printer without having an alert sent to the host. The timer can be set from 0 to 98 minutes. To turn the timer off, specify 99.<br><br>**Note:** IBM recommends that you set the SNA Intervention Timer in the printer configuration to **off** for printer sharing. If not, other writers can print their jobs before the original writer can get back to finish the job that had an intervention that caused the SNA Intervention Timer to expire. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Local LU Name** | The name of the local logical unit. The value you specify for Local LU Name must match:<br>• The name on the LU statement in the VTAM Major Node definition (see topic 160).<br>• The value on the LUNAME statement in the PSF Startup Procedure (see topic 106). |
| **Remote LU Name** | The name of the remote logical unit. The value you specify for Remote LU Name must match:<br>• The VTAM APPLID (see topic 111).<br>• The APPLID in the PSF Startup Procedure (see topic 106). |
| **Mode Name** | Mode name should be null (blank). |
| **Remote Address** | The remote host token-ring adapter card address. The value you specify for Remote Address must match the LOCADD address on the LINE statement in the NCP definition. |
| **Local Network Name** | The name of the network the printer is attached to. If the printer and the host are in the same network, the Local Network Name should be the same as the Remote Network Name. |
| **Control Point Name** | The printer control point name. The Control Point Name must be a unique address on the token ring.<br>**For printers other than the 3130 Release 2**, you can specify the control point name in the attachment configuration, or in a VTAM definition. If you specify Control Point Name in the attachment configuration, it must match:<br>• The VTAM APPLID (see topic 111).<br>• The APPLID in the PSF Startup Procedure (see topic 106).<br>**For the 3130 Release 2**, Control Point Name should match the CPNAME value in the VTAM Major Node definition (see topic 160). |
| **Alternate Address** | Sets the LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. If you specify the Call Type attachment parameter as Listen, the value for Alternate Address must match the last twelve digits on the DIALNO parameter on the PATH statement in the VTAM Major Node definition (see topic 160). |
| **Ring Speed** | The ring speed of the network the adapter is attached to. The value you specify for Ring Speed must match the TRSPEED parameter in the NCP. Specifying the wrong value can cause the network to stop operating. |
| **SSCP ID** | Specifies the ID of the controlling system services control point in the SNA network. Although the SSCP Identifier is 12 digits, you specify only the last four digits in the attachment configuration. The printer automatically sets the first eight digits to 0500 0000.<br>This value must be the hexadecimal equivalent of the decimal value on the SSCPID statement in the ATCSTR00 data set (see topic 112).<br>The printer uses this ID to send information to the host system's Netview Programs. If the host does not use Netview, or the SNA Intervention Timer is set to 99, set SSCP ID to **0**. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Local LU Address** | The destination address used by other systems to send information to the local logical unit. The value you specify for Local LU Address must match the LOCADDR parameter in the VTAM Major Node definition (see topic 160). |
| **Call Type** | Specifies how the host and printer make contact. There are two settings: Call and Listen.<br>• If you set Call Type to **Call**, the printer initiates contact with the host. The LOGAPPL statement in the VTAM Major Node definition (see topic 160) must specify the VTAM APPLID (see topic 111).<br>**Note:** For 3130 Release 2, when using printer sharing, do not use the LOGAPPL=APPLID parameter on the LU statements.<br>• If you set Call Type to **Listen**, the printer waits, or "listens," for calls from the host. The last twelve digits on the DIALNO statement in the VTAM Major Node definition (see topic 160) must match the value you specify for Alternate Address. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Enable SNA** | Specifies whether the token ring is enabled or disabled for SNA. Specify **Enabled** (the default value). |
| **Enable TCP/IP** | Specifies whether the token ring is enabled or disabled for TCP/IP. The default is **Enabled**. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. You can use the MAC address for the printer's alternate address. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **SNA Token Ring**. |
| **Enable IPDS** | Specify **ENABLED.**<br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |
| **Local LU Name** | **Note:** For the 3130 Release 2, Local LU name entered at the printer must not match the Remote LU Name entered at the printer, and must not match the control point name entered at the printer. |
| **Solicit SSCP** | This parameter should be set to **YES** except for OS/400 V2R2 and V2R3 environments. |

## VTAM LOGMODE Table (Local 3745)

Figure 53 shows a sample VTAM LOGMODE Table for a 3745 token-ring attachment on a TIC1 line. For a TIC2 line, specify **X′86F8′** for RUSIZES.

Highlighted values are required or recommended, or they must match another configuration value.

```
IBM3935   MODEENT LOGMODE=IBM3935,FMPROF=X'13',TSPROF=X'07',          X
               PRIPROT=X'B0',SECPROT=X'B0',                           X
               COMPROT=X'D0B1',RUSIZES=X'8787',                       X
               PSERVIC=X'060200000000000000002000',                   X
               PSNDPAC=X'03',SRCVPAC=X'03',                           X
               SSNDPAC=X'00'
*
```

*Figure 53. VTAM LOGMODE (Partial, Local 3745)*

| Field | Notes |
|---|---|
| **LOGMODE** | The value you specify for LOGMODE must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The name on the DLOGMOD parameter in the NCP. |
| **RUSIZES** | For maximum performance, specify **X′8787′** for a type TIC1 line; specify **X′86F8′** for a type TIC2 line. |

## VTAM Switched Major Node (Local 3745)

This section shows two sample definitions:

- Figure 54 shows a sample VTAM Switched Major Node Definition for a TIC1 line, with CALL TYPE=LISTEN. The VTAM Switched Major Node Definition for a Type TIC2 line would be similar, except that you must specify a different value for MAXDATA. (Specify **1033** for a type TIC1 line; specify **3849** for a type TIC2 line.)
- Figure 55 on page 161 shows the VTAM Switched Major Node Definition with CALL TYPE=CALL. (The main difference is that for CALL TYPE=CALL the definition includes a LOGAPPL statement; for CALL TYPE=LISTEN the definition includes a DIALNO statement.)

```
* MAJOR NODE DEFINITION
*********************************************************************
TOKEN530 VBUILD TYPE=SWNET,MAXGRP=1,MAXNO=1
*
PU3935   PU    ADDR=04,                    COULD BE ANYTHING ....    X
               IDBLK=071,                                            X
               IDNUM=00001,                FOR PC                    X
               CPNAME=PRT006,              CONTROL POINT NAME        X
               MAXPATH=1,                  NUMBER OF DIFFERENT TICS  X
               VPACING=0,                  NO PACING                 X
               PUTYPE=2,                   TIC ==> PU TYPE 2         X
               SSCPFM=USSSCS,              CHARACTER CODED LUS       X
               MAXDATA=1033,               MAXDATA <= MAXTSL         X
               MODETAB=MODEIBM,            NAME OF LOADLIB  ...      X
               DLOGMOD=IBM3935              LOG MODE TABLE
*
*                      T S
*                      I A
*                      C PTOKEN RING ADDRESS
*                      | ||   | | |
PTH3935  PATH  DIALNO=0104400050050043,   ADDRESS OF UNIT 10 ON RING   X
               GRPNM=G29LAB,              LOGICAL GROUP - TIC 1      X
               GID=1,PID=1                GROUP AND PATH IDENTIFER
*
*
LU3935   LU    LOCADDR=1                  LU FOR PRINTER
```

*Figure 54. VTAM Major Node Definition for Local 3745 Token-Ring (TIC1 Line, Call Type=Listen)*

| Field | Notes |
|---|---|
| **IDBLK** | Specify **071**. |
| **IDNUM** | This value must match the last five digits of the XID Number parameter in the token-ring attachment configuration. |
| **CPNAME** | For the 3130 Release 2, this value must match the Control Point Name parameter in the token-ring attachment configuration. |
| **MAXDATA** | Specify **1033** for a TIC1 line; specify **3849** for a TIC2 line. The value you specify for MAXDATA must be less than or equal to the MAXTSL value you specify in the ACF/NCP. |

| Field | Notes |
|---|---|
| **DLOGMOD** | The value you specify for DLOGMOD must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The LOGMODE parameter on the MODEENT statement in the VTAM LOGMODE table. |
| **DIALNO** | The first two digits (the TIC) must match:<br>• The value on the PORTADD statement in the NCP LINE statement.<br>• The value on the PHYPORT statement in the NCP GROUP statement.<br>The last twelve digits of this value must match the Alternate Address parameter in the token-ring attachment configuration. |
| **LU name** | The LU name (LU3935 in this example) must match:<br>• The value on the LUNAME statement in the PSF Startup Procedure<br>• The Local LU Name parameter in the token-ring attachment configuration. |
| **LOCADDR** | This value must match the Local LU Address parameter in the token-ring attachment configuration. |

```
* MAJOR NODE DEFINITION
*********************************************************************
TOKEN530 VBUILD TYPE=SWNET,MAXGRP=1,MAXNO=1
*
PU3935   PU    ADDR=04,                    COULD BE ANYTHING ....    X
               ANS=CONTINUE,               FOR DIAL IN               X
               DISCNT=NO,                  FOR DIAL IN               X
               VPACING=0,                  NO PACING                 X
               IDBLK=071,                                            X
               IDNUM=00001,                FOR PC                    X
               CPNAME=PRT006,              CONTROL POINT NAME        X
               ISTATUS=ACTIVE,             ACTIVATE ON START UP      X
               MAXPATH=1,                  NUMBER OF DIFFERENT TICS  X
               PUTYPE=2,                   TIC ==> PU TYPE 2         X
               SSCPFM=USSSCS,              CHARACTER CODED LUS       X
               MAXDATA=1033,               MAXDATA <= MAXTSL         X
               MAXOUT=7,                   7 FRAMES BEFORE RESPONSE  X
               MODETAB=MODEIBM,            NAME OF LOADLIB  ...      X
               DLOGMOD=IBM3935              LOG MODE TABLE
*
*
LU3935   LU    LOCADDR=1                LU FOR PRINTER
               ISTATUS=ACTIVE,             ACTIVATE ON START UP      X
               LOGAPPL=PSFFSA1
```

*Figure 55. VTAM Major Node Definition for Local 3745 Token-Ring (Type TIC1 Line, Call Type=Call)*

| Field | Notes |
|---|---|
| **IDBLK** | Specify **071**. |
| **IDNUM** | This value must match the last five digits of the XID Number parameter in the token-ring attachment configuration. |
| **CPNAME** | For the 3130 Release 2, this value must match the Control Point Name parameter in the token-ring attachment configuration. |

| Field | Notes |
|---|---|
| **MAXDATA** | Specify **1033** for a type TIC1 line; specify **3849** for a type TIC2 line. Note that the value you specify for MAXDATA must be less than or equal to the MAXTSL value you specify in the ACF/NCP. |
| **DLOGMOD** | The value you specify for DLOGMOD must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The LOGMODE parameter on the MODEENT statement in the VTAM LOGMODE table. |
| **LU name** | The LU name (LU3935 in this example) must match:<br>• The value on the LUNAME statement in the PSF Startup Procedure<br>• The Local LU Name parameter in the token-ring attachment configuration. |
| **LOCADDR** | This value must match the Local LU Address parameter in the token-ring attachment configuration. |
| **LOGAPPL** | This value must match the VTAM APPLID.<br>**Note:** For 3130 Release 2, when using printer sharing, do not use the LOGAPPL=APPLID parameter on the LU statements. |

## ACF/NCP (Local 3745)

Figure 56 shows information you need to add to your NCP.

**Notes:**

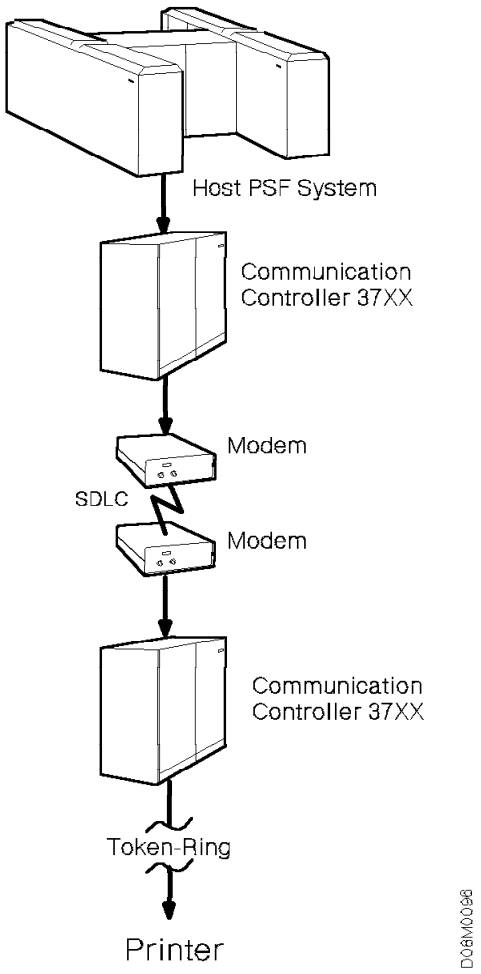
1. Figure 56 is for a Type TIC1 Line. For a Type TIC2 line, you need to specify different values for MAXTSL, ADAPTER, and TRSPEED.
2. Highlighted values are required or recommended, or they must match another configuration value.

```
*       NCP GEN FOR 37XX TOKEN RING
*
G29LAB   GROUP ECLTYPE=PHYSICAL          PHYSICAL GROUP
*
LN29TLAB LINE LOCADD=400022950000,       TOKEN RING LOCAL ADMIN. ADR.  *
              ADDRESS=(81,FULL),         TOKEN RING 37XX PORT ADDRESS  *
              PORTADD=1,                 TOKEN RING PHYSICAL ADDRESS   *
              MAXTSL=1108,   TIC1 MAXIMUM IS 2184                      *
              RCVBUFC=4095,                                            *
              ADAPTER=TIC1,                                            *
              TRSPEED=4,                                               *
              UACB=(X$P2AX,X$P2AR)
*
PU29TLAB PU
*
LU29TLAB LU ISTATUS=INACTIVE
*
*        LOGICAL TOKEN RING DEFINITIONS
*
*   The Group name is the tie-in to the Switched Major Nodes          *
*   PATH statement for the device on the Token Ring                   *
*
G29LAB   GROUP ECLTYPE=LOGICAL,          LOGICAL DEF FOR TOKEN ...     *
              CALL=INOUT,                CALL IN OR OUT                *
              AUTOGEN=2,                 GEN PU AND LU STATEMENTS      *
              PHYPORT=1,                 POINT BACK TO PHYSICAL PORT 1 *
              TYPE=NCP,                                                *
              DIAL=YES,                                                *
              LNCTL=SDLC,                                              *
              LEVEL2=ECLNAVL2,                                         *
              LEVEL3=ECLNAVL3,                                         *
              LEVEL5=NCP,                                              *
              TIMER=(ECLNAVT1,,ECLNAVT2,ECLNAVT3),                     *
              XIO=(ECLNAVXL,ECLNAVXS,ECLNAVXI,ECLNAVXK),               *
              USERID=(5668854,ECLVBDT,NORECMS,,ECLNMVT),               *
              LINEADD=NONE,                                            *
              LINEAUT=YES,                                             *
              MAXPU=1,                                                 *
              NPACOLL=NO,                                              *
              PUTYPE=2,                                                *
              XMITDLY=NONE,                                            *
              COMPOWN=YES,                                             *
              RETRIES=(6,0,0,6)
         GENEND
         END
```

*Figure 56. NCP for the Remote 3174 Controller*

| Field | Notes |
|---|---|
| **LOCADD** | This value must match the Remote Address parameter in the token-ring attachment configuration. |
| **PORTADD** | The value you specify for PORTADD must match the value you specify for the TIC in the VTAM switched major node definition. The TIC is the first two digits of the DIALNO value on the PATH statement. |
| **MAXTSL** | Specify **1108** for a TIC1 line; specify **4105** for a TIC2 line. Note that the value you specify for MAXTSL must be greater than or equal to the MAXDATA value you specify in the VTAM node definition. |
| **ADAPTER** | Specify **TIC1** for a TIC1 line; specify **TIC2** for a TIC2 line. |
| **RCVBUFC** | Specify **4095** for a TIC1 line; specify **32000** for a TIC2 line. |
| **TRSPEED** | For a TIC1 line, specify **4**. For a TIC2 line, specify **4** or **16**, depending on the speed of the token ring. This value must match the Ring Speed parameter in the token-ring attachment configuration. |
| **PHYPORT** | The value you specify for PHYPORT must match the value you specify for the TIC in the VTAM switched major node definition. The TIC is the first two digits of the DIALNO value on the PATH statement. |

# Chapter 13. Remote 3745 Token-Ring Attachment




*Remote 3745 Token-Ring Attachment.* Note that the modems and leased line can be replaced by a modem eliminator.

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and remote 3745 token-ring attachment:

**Tasks described in this chapter:**

- Complete the worksheet for your printer.
- Update the VTAM Major Node definition. See "VTAM Switched Major Node (Remote 3745)" on page 173.
- Update the NCP. See "ACF/NCP (Remote 3745)" on page 175.

**Tasks described in other chapters:**

- Update the MVS printer definitions (this applies only when your host system is MVS). See "MVS Printer Definitions" on page 106.
- Update the startup procedure for your host system:
  - "PSF/MVS Startup Procedure" on page 107
  - "PSF/VSE Startup Procedure" on page 109
  - "PSF/VM PDM Definition" on page 110
- Update the following VTAM definitions, including:
  - "Member ATCCON00" on page 111
  - "VTAM APPLID" on page 111
  - "ATCSTR00 Data Set" on page 112
- Update the VTAM LOGMODE table. See "VTAM LOGMODE Table (Local 3745)" on page 159.

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

## Remote 3745 Token-Ring Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- The **Acceptable Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

→ The lower part of the worksheet lists configuration parameters that do not correspond to attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the host environment is set up properly for the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 29. Token-Ring SNA - Remote 3745 Attachment Configuration Worksheet*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM Definitions | NCP Definition | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| Installed | | | | | Yes or No | **Yes** |
| XID Number | | | IDBLK, IDNUM (Major Node) | | 07100000 to FFFFFFFF | **071**_____ |
| Remote Network Name | SYSTEM, JUNIT | | NETID (ATCSTR00) | | Up to 8 characters | |
| SNA Intervention Timer | | | | | 0 to 99 (Minutes) | |
| Local LU Name | | LUNAME | Name of LU (Major Node) | | Up to 8 characters | |
| Remote LU Name | | APPLID | APPLID | | Up to 8 characters | |
| Mode Name | | | | | | **null (blank)** |
| Remote Address | | | | LOCADD | 400000000000 to 7FFFFFFFFFFF | |
| Local Network Name[2] | | | | | Up to 8 characters | |
| Control Point Name[2] | | APPLID | APPLID | | Up to 8 characters | |
| Alternate Address | | | DIALNO (Major Node) | | 400000000000 to 7FFFFFFFFFFF | **null (blank)** if Call Type=Call |
| Ring Speed (Mbps) | | | | TRSPEED | 4 or 16 | |
| SSCP ID | | | SSCPID (ATCSTR00) | | 0000 to FFFF | |
| Local LU Address | | | LOCADDR (Major Node) | | 0 to 255 | |
| Call Type | | | | | Call or Listen | |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | | |
| | PROC(JES2), JNAME(JES3), PNAME(JES3) | PROC name (MVS only) | | | | |
| | | LOGMODE | LOGMODE (LOGMODE table) DLOGMOD (Major Node) | | | |
| | | | CALL (NCP) | | | **INOUT** |
| | | | LOGAPPL (Major Node) APPLID | | | |
| | | | RUSIZES (LOGMODE table) | | | **X'8787'** |
| | | | MAXDATA | MAXTSL | | **1033** |

**Notes:**

1. Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9.
2. If you specify a Local Network Name, you must also specify a Control Point Name.

*Table 30 (Page 1 of 2). Token-Ring SNA - Remote 3745 Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM Definitions | NCP Definition | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Protocols | | | | | | |
| Enable SNA | | | | | Enable or Disable | **Enable** |
| Enable TCP/IP | | | | | Enable or Disable | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> Address | | | | | | |
| Alternate Address | | | DIALNO (Major Node) | | 400000000000 to 7FFFFFFFFFFF | **null (blank)** if Call Type=Call |
| MAC Address | | | | | | Display Only |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration | | | | | | |
| Auto Start | | | | | Yes or No | |
| Ring Speed (Mbps) | | | | TRSPEED | 4 or 16 | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> SNA | | | | | | |
| XID Number | | | IDBLK, IDNUM (Major Node) | | 07100000 to FFFFFFFF | **071**_____ |
| Remote Network Name | SYSTEM, JUNIT | | NETID (ATCSTR00) | | Up to 8 characters | |
| SNA Intervention Timer | | | | | 0 to 99 (Minutes) | |
| Local LU Name | | LUNAME | Name of LU (Major Node) | | Up to 8 characters | |
| Remote LU Name | | APPLID | APPLID | | Up to 8 characters | |
| Mode Name | | | | | | **null (blank)** |
| Remote Address | | | | LOCADD | 400000000000 to 7FFFFFFFFFFF | |
| Local Network Name[2] | | | | | Up to 8 characters | |
| Control Point Name[2] | | | CPNAME (Major Node) | | Up to 8 characters | |
| SSCP ID | | | SSCPID (ATCSTR00) | | 0000 to FFFF | |
| Local LU Address | | | LOCADDR (Major Node) | | 0 to 255 | |
| Call Type | | | | | Call or Listen | |
| Solicit SSCP | | | | | Yes or No | **YES** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | | |
| Source Attachment | | | | | | **SNA TOKEN RING** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | | |
| Enable IPDS | | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | | |
| | PROC(JES2), JNAME(JES3), PNAME(JES3) | PROC name (MVS only) | | | | |

*Table 30 (Page 2 of 2). Token-Ring SNA - Remote 3745 Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM Definitions | NCP Definition | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| | | LOGMODE | LOGMODE (LOGMODE table)<br>DLOGMOD (Major Node) | | | |
| | | | CALL (NCP) | | | **INOUT** |
| | | | LOGAPPL (Major Node)<br>APPLID | | | |
| | | | RUSIZES (LOGMODE table) | | | **X'8787'** |
| | | | MAXDATA | MAXTSL | | **1033** |

**Notes:**

1. Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9.
2. If you specify a Local Network Name, you must also specify a Control Point Name.

## Remote 3745 Token-Ring Attachment Configuration

Figure 57 shows a sample configuration for a remote 3745 token-ring attachment. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 172 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
XID number:                 7100001
Remote network name:        USIBMBQ
SNA Intervention Timer:     99
Local LU name:              LU3935
Remote LU name:             PSFFSA1
Mode name:
Remote address:             400022250000
Local network name:         USIBMBQ
Control point name:         PSFFSA1
Alternate address:          400030001091
Ring speed:                 16
SSCP ID:                    0000
Local LU address:           1
Call Type:                  Call
```

*Figure 57. Remote 3745 Token-Ring Attachment Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Install Status** | Specify **Yes**. |
| **XID Number** | An ID that distinguishes a specific piece of equipment from all other similar pieces of equipment on the network.<br><br>The first three digits must be **071** and must match the IDBLK value in the VTAM Major Node Definition (see topic 173). The last five digits must match the IDNUM value in the VTAM Major Node Definition. |
| **Remote Network Name** | The name of the network that the host belongs to. The value you specify for Remote Network Name must match:<br><br>• The NETID parameter in the ATCSTR00 data set (see topic 112).<br>• The SYSTEM parameter on the JES3 printer definition FSSDEF statement (see topic 106).<br>• The JUNIT parameter on the JES3 printer definition DEVICE statement (see topic 106). |
| **SNA Intervention Timer** | This timer defines how many minutes the printer waits before notifying the host that an attachment is not operating. The delay provides time to fix the problem at the printer without having an alert sent to the host. The timer can be set from 0 to 98 minutes. To turn the timer off, specify 99.<br><br>**Note:** IBM recommends that you set the SNA Intervention Timer in the printer configuration to **off** for printer sharing. If not, other writers can print their jobs before the original writer can get back to finish the job that had an intervention that caused the SNA Intervention Timer to expire. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Local LU Name** | The name of the local logical unit. The value you specify for Local LU Name must match:<br>• The name on the LU statement in the VTAM Major Node definition (see topic 173).<br>• The value on the LUNAME statement in the PSF Startup Procedure (see topic 106). |
| **Remote LU Name** | The name of the remote logical unit. The value you specify for Remote LU Name must match:<br>• The VTAM APPLID (see topic 111).<br>• The APPLID in the PSF Startup Procedure (see topic 106). |
| **Mode Name** | Mode name should be null (blank). |
| **Remote Address** | The remote host token-ring adapter card address. The value you specify for Remote Address must match the LOCADD address on the LINE statement in the NCP definition. |
| **Local Network Name** | The name of the network the printer is attached to. If the printer and the host are in the same network, the Local Network Name should be the same as the Remote Network Name. |
| **Control Point Name** | The printer control point name. The Control Point Name must be a unique address on the token ring.<br>**For printers other than the 3130 Release 2**, you can specify the control point name in the attachment configuration, or in a VTAM definition. If you specify Control Point Name in the attachment configuration, it must match:<br>• The VTAM APPLID (see topic 111).<br>• The APPLID in the PSF Startup Procedure (see topic 106).<br>**For the 3130 Release 2**, Control Point Name should match the CPNAME value in the VTAM Major Node definition (see topic 173). |
| **Alternate Address** | Sets the LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. If you specify the Call Type attachment parameter as Listen, the value you specify for Alternate Address must match the last twelve digits on the DIALNO parameter on the PATH statement in the VTAM Major Node definition (see topic 173). |
| **Ring Speed** | The ring speed of the network the adapter is attached to. The value you specify for Ring Speed must match the TRSPEED parameter in the NCP. Specifying the wrong value can cause the network to stop operating. |
| **SSCP ID** | Specifies the ID of the controlling system services control point in the SNA network. Although the SSCP Identifier is 12 digits, you specify only the last four digits in the attachment configuration. The printer automatically sets the first eight digits to 0500 0000.<br>This value must be the hexadecimal equivalent of the decimal value on the SSCPID statement in the ATCSTR00 data set (see topic 112).<br>The printer uses this ID to send information to the host system's Netview Programs. If the host does not use Netview, or the SNA Intervention Timer is set to 99, set SSCP ID to **0**. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Local LU Address** | The destination address used by other systems to send information to the local logical unit. The value you specify for Local LU Address must match the LOCADDR parameter on the LU statement in the VTAM Major Node definition (see topic 173). |
| **Call Type** | Specifies how the host and printer make contact. There are two settings: Call and Listen.<br>• If you set Call Type to **Call**, the printer initiates contact with the host. The LOGAPPL statement in the VTAM Major Node definition (see topic 173) must specify the VTAM APPLID (see topic 111).<br>**Note:** For 3130 Release 2, when using printer sharing, do not use the LOGAPPL=APPLID parameter on the LU statements.<br>• If you set Call Type to **Listen**, the printer waits, or "listens," for calls from the host. The last twelve digits on the DIALNO statement in the VTAM Major Node definition (see topic 173) must match the value you specify for Alternate Address. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Enable SNA** | Specifies whether the token ring is enabled or disabled for SNA. Specify **Enabled** (the default value). |
| **Enable TCP/IP** | Specifies whether the token ring is enabled or disabled for TCP/IP. The default is **Enabled**. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. You can use the MAC address for the printer's alternate address. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **SNA Token Ring**. |
| **Enable IPDS** | Specify **ENABLED.**<br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |
| **Local LU Name** | **Note:** For the 3130 Release 2, Local LU name entered at the printer must not match the Remote LU Name entered at the printer, and must not match the control point name entered at the printer. |
| **Solicit SSCP** | This parameter should be set to **YES** except for OS/400 V2R2 and V2R3 environments. |

## VTAM Switched Major Node (Remote 3745)

This section shows two sample definitions:

- Figure 58 shows a sample VTAM Switched Major Node Definition for Call Type=Listen.
- Figure 59 on page 174 shows a sample VTAM Switched Major Node Definition for Call Type=Call.

Highlighted values are required or recommended, or they must match another configuration value.

```
* MAJOR NODE DEFINITION
*********************************************************************
TOKEN22  VBUILD TYPE=SWNET,MAXGRP=1,MAXNO=1
*
T22SWPU  PU    ADDR=04,                      COULD BE ANYTHING ....    X
               IDBLK=071,                                              X
               IDNUM=00001,                  FOR PC                    X
               CPNAME=PRT006,                CONTROL POINT NAME        X
               MAXPATH=1,                    NUMBER OF DIFFERENT TICS  X
               VPACING=0,                    NO PACING                 X
               PUTYPE=2,                     TIC ==> PU TYPE 2         X
               SSCPFM=USSSCS,                CHARACTER CODED LUS       X
               MAXDATA=1033,                  MAXDATA <= MAXTSL        X
               MODETAB=MODEIBM,              NAME OF LOADLIB  ...      X
               DLOGMOD=IBM3935                LOG MODE TABLE
*
*                      T S
*                      I A
*                      C PTOKEN RING ADDRESS
*                      | ||   | | |
T22PATH  PATH  DIALNO=0104400030001091,   ADDRESS ON RING             X
               GRPNM=G22LAB,              LOGICAL GROUP - TIC 1      X
               GID=1,PID=1                GROUP AND PATH IDENTIFER
*
*
LU3935   LU    LOCADDR=1                  LU FOR PRINTER
```

*Figure 58. VTAM Major Node Definition (Local 3745, Call Type=Listen)*

| Field | Notes |
|---|---|
| **IDBLK** | Specify **071**. |
| **IDNUM** | This value must match the last five digits of the XID Number parameter in the token-ring attachment configuration. |
| **CPNAME** | For the 3130 Release 2, this value must match the Control Point Name parameter in the token-ring attachment configuration. |
| **MAXDATA** | Specify **1033**. Note that the value you specify for MAXDATA must be less than or equal to the MAXTSL value you specify in the ACF/NCP. |
| **DLOGMOD** | The value you specify for DLOGMOD must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The LOGMODE parameter on the MODEENT statement in the VTAM LOGMODE table. |
| **DIALNO** | The last twelve digits of this value must match the Alternate Address parameter in the token-ring attachment configuration. |

| Field | Notes |
|---|---|
| **LU name** | The LU name (LU3935 in this example) must match:<br>• The value on the LUNAME statement in the PSF Startup Procedure<br>• The Local LU Name parameter in the token-ring attachment configuration. |
| **LOCADDR** | This value must match the Local LU Address parameter in the token-ring attachment configuration. |

```
* MAJOR NODE DEFINITION
*********************************************************************
TOKEN22  VBUILD TYPE=SWNET,MAXGRP=1,MAXNO=1
*
T22SWPU  PU    ADDR=04,                    COULD BE ANYTHING ....    X
               IDBLK=071,                                            X
               IDNUM=00001,                FOR PC                    X
               CPNAME=PRT006,              CONTROL POINT NAME        X
               MAXPATH=1,                  NUMBER OF DIFFERENT TICS  X
               VPACING=0,                  NO PACING                 X
               PUTYPE=2,                   TIC ==> PU TYPE 2         X
               SSCPFM=USSSCS,              CHARACTER CODED LUS       X
               MAXDATA=1033,               MAXDATA <= MAXTS L        X
               MODETAB=MODEIBM,            NAME OF LOADLIB  ...      X
               DLOGMOD=IBM3935              LOG MODE TABLE
*
*
LU3935   LU    LOCADDR=1                 LU FOR PRINTER
               LOGAPPL=PSFFSA1
```

*Figure 59. VTAM Major Node Definition (Local 3745, Call Type=Call)*

| Field | Notes |
|---|---|
| **IDBLK** | Specify **071**. |
| **IDNUM** | This value must match the last five digits of the XID Number parameter in the token-ring attachment configuration. |
| **CPNAME** | For the 3130 Release 2, this value must match the Control Point Name parameter in the token-ring attachment configuration. |
| **MAXDATA** | Specify **1033**. Note that the value you specify for MAXDATA must be less than or equal to the MAXTSL value you specify in the ACF/NCP. |
| **DLOGMOD** | The value you specify for DLOGMOD must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The LOGMODE parameter on the MODEENT statement in the VTAM LOGMODE table. |
| **LU name** | The LU name (LU3935 in this example) must match:<br>• The value on the LUNAME statement in the PSF Startup Procedure<br>• The Local LU Name parameter in the token-ring attachment configuration. |
| **LOCADDR** | This value must match the Local LU Address parameter in the token-ring attachment configuration. |
| **LOGAPPL** | Set this value to the name of the VTAM APPLID.<br>**Note:** For 3130 Release 2, when using printer sharing, do not use the LOGAPPL=APPLID parameter on the LU statements. |

## ACF/NCP (Remote 3745)

### NCP for Local 3745

Figure 60 shows information you need to add to your NCP for the Local 3745 Controller. Note that it shows only part of an actual NCP. Highlighted values are required or recommended, or they must match another configuration value.

```
*       NCP GEN FOR LOCAL 37XX
*
*
LN3012   LINE  ADDRESS=(12,FULL),        LINE ADDRESS                 X
               CLOCKING=EXT,             MODEM PROVIDES CLOCKING      X
               DUPLEX=FULL,              SET DUPLEX FULL              X
               IPL=YES,                  ALLOW IPL ON THIS ADDRESS    X
               ISTATUS=INACTIVE,         USER MUST START              X
               MONLINK=YES,              MONITOR LINK                 X
               NRZI=YES,                 NRZI = YES                   X
               PAUSE=0.1,                                             X
               RETRIES=(5,1,2),          NUMBER OF RETRIES            X
               SERVLIM=254,                                           X
               SDLCST=(SDPN301,SDSN301), SDLCST PARMS                 X
               SRT=(,64),                                             X
               SPEED=56000               BITS PER SECOND
*
PU3012   PU    MAXOUT=7,                                              X
               PUTYPE=4,                                              X
               TGN=8,                                                 X
               ANS=CONTINUE
         GENEND
         END
```

*Figure 60. NCP for the Local 3745 Controller*

## NCP for Remote 3745

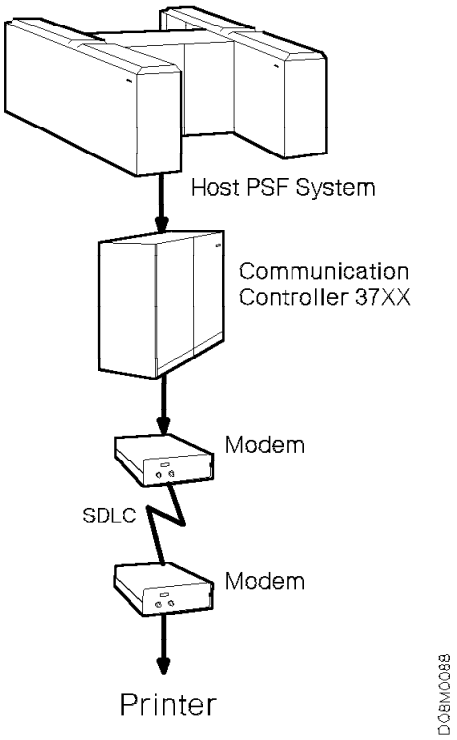
Figure 61 shows information you need to add to your NCP for the Remote 3745 Controller. Note that it shows only part of an actual NCP. Highlighted values are required or recommended, or they must match another configuration value.

```
*       NCP GEN FOR REMOTE 37XX
*
*
LN2212   LINE  ADDRESS=(12,FULL),        LINE ADDRESS                 X
               CLOCKING=EXT,             MODEM PROVIDES CLOCKING      X
               DUPLEX=FULL,              SET DUPLEX FULL              X
               IPL=YES,                  ALLOW IPL ON THIS ADDRESS    X
               ISTATUS=INACTIVE,         USER MUST START              X
               MONLINK=YES,              MONITOR LINK                 X
               NRZI=YES,                 NRZI = YES                   X
               PAUSE=0.1,                                             X
               RETRIES=(5,1,2),          NUMBER OF RETRIES            X
               SERVLIM=254,                                           X
               SDLCST=(SDP,SDS),         SDLCST PARMS                 X
               SRT=(,64),                                             X
               SPEED=56000               BITS PER SECOND
*
PU2212   PU    MAXOUT=7,                                              X
               PUTYPE=4,                                              X
               TGN=8,                                                 X
               ANS=CONTINUE
*
LN22TLAB LINE LOCADD=400022250000,       TOKEN RING LOCAL ADMIN. ADR. X
               ISTATUS=ACTIVE,                                        X
               ADDRESS=(17,FULL),        TOKEN RING 37XX PORT ADDRESS X
               PORTADD=1,                TOKEN RING PHYSICAL ADDRESS  X
               MAXTSL=1108,                                           X
               RCVBUFC=4095,                                          X
               TRSPEED=16
*
PU22TLAB PU
*
LU22TLAB LU ISTATUS=INACTIVE
*
*
G22LAB   GROUP ECLTYPE=LOGICAL,          LOGICAL DEF FOR TOKEN ...    X
               CALL=INOUT,               CALL IN OR OUT               X
               AUTOGEN=2,                GEN PU AND LU STATEMENTS     X
               PHYPORT=1                 POINT BACK TO PHYSICAL PORT 1
         GENEND
         END
```

*Figure 61. NCP for the Remote 3745 Controller*

| Field | Notes |
|---|---|
| **LOCADD** | This value must match the Remote Address parameter in the token-ring attachment configuration. |
| **MAXTSL** | Specify **1108**. Note that the value you specify for MAXTSL must be greater than or equal to the MAXDATA value you specify in the VTAM node definition. |
| **TRSPEED** | Specify **4** or **16**, depending on the speed of the token ring. This value must match the Ring Speed parameter in the token-ring attachment configuration. |
| **CALL** | Specify **INOUT**. |

# Chapter 14. SDLC Attachment




*SDLC Attachment*. Note that the modems and leased line can be replaced by a modem eliminator.

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and SDLC attachment:

**Tasks described in this chapter:**

- Complete the worksheet for your printer.
- Update the VTAM LOGMODE table. See "VTAM LOGMODE Table - SDLC" on page 183.
- Update the NCP GEN. See "ACF/NCP (SDLC)" on page 185.

**Tasks described in other chapters:**

- Update the MVS printer definitions (this applies only when your host system is MVS). See "MVS Printer Definitions" on page 106.
- Update the startup procedure for your host system:
  - "PSF/MVS Startup Procedure" on page 107
  - "PSF/VSE Startup Procedure" on page 109
  - "PSF/VM PDM Definition" on page 110
- Update the following VTAM definitions, including:
  - "Member ATCCON00" on page 111
  - "VTAM APPLID" on page 111
  - "ATCSTR00 Data Set" on page 112

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

## SDLC Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- The **Acceptable Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

→ The lower part of the worksheet lists configuration parameters that do not correspond to attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the host environment is set up properly for the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 31. SDLC Attachment Configuration Worksheet*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM Definitions | NCP Definition | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| Installed | | | | | Yes or No | **Yes** |
| Encoding | | | | NRZI | NRZI or NRZ | |
| Request to send | | | | | Controlled or Continuous | **Controlled** |
| Station Address | | | | PU ADDR | 01 to FE | |
| XID Number | | | | | 07100000 to FFFFFFFF | **7100000** |
| Remote Network Name | SYSTEM, JUNIT | | NETID (ATCSTR00) | | Up to 8 characters | |
| SNA Intervention Timer | | | | | 0 to 99 (Minutes) | |
| SDLC Type | | | | | EIA 232 or V.35 | |
| Local LU Name | | LUNAME | | Name of LU | Up to 8 characters | |
| Remote LU Name | | APPLID | APPLID | | Up to 8 characters | |
| Mode Name | | | | | | **null (blank)** |
| Local Network Name[2] | | | | | Up to 8 characters | |
| Control Point Name[2] | | APPLID | APPLID | | Up to 8 characters | |
| SSCP ID | | | SSCPID (ATCSTR00) | | 0000 to FFFF | |
| Local LU Address | | | | LOCADDR | 0 to 255 | |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | | |
| | PROC(JES2), JNAME(JES3), PNAME(JES3) | PROC name (MVS only) | | | | |
| | | LOGMODE | LOGMODE (LOGMODE table) DLOGMOD (Major Node) | | | |
| | | | RUSIZES (LOGMODE table) | | | **X′86F8′** |
| | | | | MAXDATA (NCP) | | **3849** |

**Notes:**

1. Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9.
2. If you specify a Local Network Name, you must also specify a Control Point Name.

*Table 32. SDLC Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | VTAM Definitions | NCP Definition | Acceptable Values | Value to Use |
|---|---|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> SDLC -> Configuration | | | | | | |
| Encoding | | | | NRZI | NRZI or NRZ | |
| Request to send | | | | | Controlled or Continuous | **Controlled** |
| Station Address | | | | PU ADDR | 01 to FE | |
| XID Number | | | | | 07100000 to FFFFFFFF | **7100000** |
| Remote Network Name | SYSTEM, JUNIT | | NETID (ATCSTR00) | | Up to 8 characters | |
| SNA Intervention Timer | | | | | 0 to 99 (Minutes) | |
| SDLC Type | | | | | EIA 232 or V.35 | |
| Local LU Name | | LUNAME | | Name of LU | Up to 8 characters | |
| Remote LU Name | | APPLID | APPLID | | Up to 8 characters | |
| Mode Name | | | | | | **null (blank)** |
| Local Network Name[2] | | | | | Up to 8 characters | |
| Control Point Name[2] | | | | | Up to 8 characters | |
| SSCP ID | | | SSCPID (ATCSTR00) | | 0000 to FFFF | |
| Local LU Address | | | | LOCADDR | 0 to 255 | |
| Auto Start | | | | | Yes or No | |
| Solicit SSCP | | | | | Yes or No | **YES** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | | |
| Source Attachment | | | | | | **SNA SDLC** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | | |
| Enable IPDS | | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | | |
| | PROC(JES2), JNAME(JES3), PNAME(JES3) | PROC name (MVS only) | | | | |
| | | LOGMODE | LOGMODE (LOGMODE table) DLOGMOD (Major Node) | | | |
| | | | RUSIZES (LOGMODE table) | | | **X'86F8'** |
| | | | | MAXDATA (NCP) | | **3849** |

**Notes:**

1. Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9.
2. If you specify a Local Network Name, you must also specify a Control Point Name.

## SDLC Attachment Configuration

Figure 62 shows a sample SDLC attachment configuration for a V.24/19.2Kb line. For a V.35/56Kb line, specify SDLC Type as **V.35** The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 183 for a description of parameters unique to the 3130 Release 2.

```
Installed                       Yes
Encoding                        NRZI
Request to send                 Controlled
Station Address                 C1
XID Number                      7100000
Remote Network Name             USIBMBQ
SNA Intervention Timer          99
SDLC Type                       EIA 232
Local LU Name                   LU3935
Remote LU Name                  PSFFSA1
Mode Name
Local Network Name              USIBMBQ
Control Point Name              PSFFSA1
SSCP ID                         0000
Local LU Address                1
```

*Figure 62. SDLC Attachment Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Install Status** | Specify **Installed**. |
| **Encoding** | Specifies the type of data encoding used to transmit data over the data link. The value can be NRZ or NRZI.<br><br>Encoding corresponds to the NRZI value in the NCP definition (see topic 185). If you explicitly specify NRZI=NO in the NCP, set Encoding to NRZ. Otherwise, set Encoding to NRZI. (NRZI=YES is the default value in the NCP.) |
| **Request to send** | Specifies how the link uses the RTS (request to send) signal when the remote and local modems are connected.<br><br>Newer modems can be set to continuous or controlled. Older modems may be set (or jumpered) to continuous or controlled. Check your modem documentation for details. |
| **Station Address** | Defines the destination address that other systems use to send information to the local physical unit (PU).<br><br>The value you specify for Station Address should match the value you specify for the PU ADDR= statement in the NCP (see topic 185). |
| **XID Number** | An ID that distinguishes a specific piece of equipment from all other similar pieces of equipment on the network.<br><br>Set this value to **07100000**. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Remote Network Name** | Identifies the network name associated with the remote logical unit. The value you specify for Remote Network Name must match:<br>• The NETID parameter in the ATCSTR00 Data Set (see topic 112).<br>• The SYSTEM parameter on the JES3 printer definition FSSDEF statement (see topic 106).<br>• The JUNIT parameter on the JES3 printer definition DEVICE statement (see topic 106). |
| **SNA Intervention Timer** | This timer defines how many minutes the printer waits before notifying the host that an attachment is not operating. The delay provides time to fix the problem at the printer without having an alert sent to the host. The timer can be set from 0 to 98 minutes. To turn the timer off, specify 99.<br>**Note:** IBM recommends that you set the SNA Intervention Timer in the printer configuration to **off** for printer sharing. If not, other writers can print their jobs before the original writer can get back to finish the job that had an intervention that caused the SNA Intervention Timer to expire. |
| **SDLC Type** | Specify SDLC type as follows:<br>• For a V.24/19.2Kb line, specify **EIA 232**<br>• For a V.35/56Kb line, specify **V.35** |
| **Local LU Name** | The name of the local logical unit. The value you specify for Local LU Name must match:<br>• The name on the LU statement in the NCP (see topic 185).<br>• The value on the LUNAME= statement in the PSF Startup Procedure (see topic 106). |
| **Remote LU Name** | The name of the remote logical unit. The value you specify for Remote LU Name must match:<br>• The APPLID on the VTAM application definition.<br>• The value on the APPLID statement in the PSF Startup Procedure (see topic 106). |
| **Mode Name** | Mode name should be null (blank). |
| **Local Network Name** | The name of the network the printer is attached to. If the printer is in the same network as the host system, you can use the same value you specified for the Remote Network Name. |
| **Control Point Name** | The printer control point name. The Control Point Name must be a unique address.<br>**For printers other than the 3130 Release 2**, you can specify the control point name in the attachment configuration, or in a VTAM definition. If you specify Control Point Name in the attachment configuration, it must match:<br>• The VTAM APPLID (see topic 111).<br>• The APPLID in the PSF Startup Procedure (see topic 106).<br>**For the 3130 Release 2**, Control Point Name is not used; however, it must not be blank and it must not match the APPLID. Instead, specify a unique value such as PRT1 or PRT2. |

| Printer Attachment Parameter | Notes |
|---|---|
| **SSCP ID** | Specifies the ID of the controlling system services control point in the SNA network. Although the SSCP Identifier is 12 digits, you specify only the last four digits in the attachment configuration. The printer automatically sets the first eight digits to 0500 0000.<br><br>This value must be the hexadecimal equivalent of the decimal value on the SSCPID statement in the ATCSTR00 data set (see topic 112).<br><br>The printer uses this ID to send information to the host system's Netview Programs. If the host does not use Netview, or the SNA Intervention Timer is set to 99, set SSCP ID to **0**. |
| **Local LU Address** | The destination address used by other systems to send information to the local logical unit. The value you specify for Local LU Address must match the LOCADDR parameter on the LU statement in the NCP (see topic 185). |

### 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **SNA SDLC**. |
| **Enable IPDS** | Specify **ENABLED.**<br><br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |
| **Solicit SSCP** | This parameter should be set to **YES** except for OS/400 V2R2 and V2R3 environments. |

## VTAM LOGMODE Table - SDLC

Figure 63 shows a sample VTAM LOGMODE Table for a 3745 SDLC attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
IBM3935  MODEENT LOGMODE=IBM3935,FMPROF=X'13',TSPROF=X'07',          X
               PRIPROT=X'B0',SECPROT=X'B0',                          X
               COMPROT=X'D0B1',RUSIZES=X'86F8',                      X
               PSERVIC=X'060200000000000000002000',                  X
               PSNDPAC=X'03',SRCVPAC=X'03',                          X
               SSNDPAC=X'00'
*
```

*Figure 63. VTAM LOGMODE Table (Partial, SDLC)*

| Field | Notes |
|---|---|
| **LOGMODE** | The value you specify for LOGMODE must match:<br><br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br><br>• The name on the DLOGMOD parameter in the NCP definition. |

| Field | Notes |
|---|---|
| **RUSIZES** | For maximum performance, specify **X′86F8′**. If your controller does not support this size, specify **X′8585′**. |

## ACF/NCP (SDLC)

Figure 64 shows information you need to add to your NCP. Note that it shows only part of an actual NCP; default values were used for parameters that are not shown. Highlighted values are required or recommended, or they must match another configuration value.

The following example is for a V.24/19.2Kb line. To modify it for a V.35/56Kb line, change the ADDRESS statement and the SPEED statement.

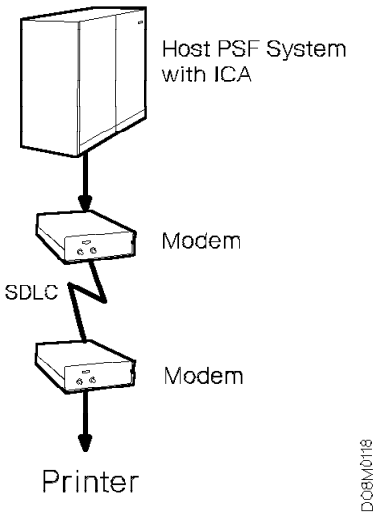
```
*
*                S D L C   L I N E S
*
*       LU6.2 PRINTER
*
*
G3ON1   GROUP  DIAL=NO,                  NOT SWITCHED                 X
               ISTATUS=ACTIVE,           FORCE ACTIVE ....            X
               LNCTL=SDLC,               SDLC LINES                   X
               REPLYTO=1,                REPLY TIME OUT VALUE         X
               TYPE=NCP                  TYPE = NCP
*
*        LINE ADDRESS 000 - FOR DEVICE
*
LN3000  LINE   ADDRESS=(000,HALF),       LINE INTERFACE ADDRESS       X
               CLOCKNG=EXT,              MODEM PROVIDES CLOCKING      X
               RETRIES=(5,1,2),          NUMBER OF RETRIES            X
               SPEED=19200               SPEED IS DETERMINED BY MODEM
               NRZI=YES,                 NRZI = YES                   X
*
         SERVICE ORDER=PU3000
*
PU3000  PU     ADDR=C1,                  ADDRESS OF 3935              X
               ANS=STOP,                                              X
               MAXDATA=3849,             RU Size plus 9 bytes         X
               MAXOUT=7,                 MAXIMUM PIU S                X
               PUTYPE=2                  PHYSICAL UNIT TYPE
*
LU3935  LU     LOCADDR=1,                LOCAL LU NAME AND ADDRESS    X
               MODETAB=MODEIBM,          LOGAPPL IS SET BY PSF
               DLOGMOD=IBM3935
```

*Figure 64. NCP for SDLC*

| Field | Notes |
|---|---|
| **SPEED** | Specify this value as follows:<br>• For a V.24/19.2Kb line, specify **19200**<br>• For a V.35/56Kb line, specify **56000** |
| **ADDR** | The value of this parameter must match the value on the Station Address parameter in the SDLC attachment configuration. |
| **NRZI** | Specify this as follows:<br>• For NRZI Data Encoding, specify **NRZI=YES**, the default value.<br>• For NRZ Data Encoding, specify **NRZI=NO**. |

| Field | Notes |
|---|---|
| **MAXDATA** | Specify **3849** for maximum performance.<br><br>**Note:** If your communications controller does not support this size, specify the largest size your controller will allow. The RUSIZE you specify in the VTAM LOGMODE table should be nine bytes less than MAXDATA. |
| **LOCADDR** | The value you specify for LOCADDR must match the Local LU Address parameter in the SDLC attachment configuration. |
| **DLOGMOD** | The value you specify for DLOGMOD must match:<br><br>• The value you specify for the LOGMODE statement in the PSF Startup Procedure.<br><br>• The value you specify for the LOGMODE statement in the VTAM LOGMODE table. |

# Chapter 15. ICA SDLC Attachment (VM and VSE Only)




*ICA SDLC Attachment.* Note that the modems and leased line can be replaced by a modem eliminator.

## Chapter Overview

The Integrated Communications Adapter (ICA) is a communications controller that is part of any 937x or 9221 host system. ICA is supported only by VSE and VM.

The following list describes tasks you need to do before you can use your printer and ICA SDLC attachment:

**Tasks described in this chapter:**

- Complete the worksheet for your printer.
- Update the VTAM LOGMODE table. See "VTAM LOGMODE Table - ICA SDLC" on page 193.
- Update the VTAM node description. See "VTAM Node for ICA SDLC" on page 194.
- Configure the ICA. See "9221 Hardware Configurations" on page 195 and "IOCDS for 9221 ICA SDLC" on page 196.

**Tasks described in other chapters:**

- Update the startup procedure for your host system:
  - "PSF/VSE Startup Procedure" on page 109
  - "PSF/VM PDM Definition" on page 110
- Update the following VTAM definitions, including:
  - "Member ATCCON00" on page 111
  - "VTAM APPLID" on page 111
  - "ATCSTR00 Data Set" on page 112

**Tasks described in other books:**

- Configure the ICA. For information on how to do this, see the hardware configuration documentation for your 937x or 9221.

**Important**—You must complete the worksheet before the customer engineer installs the printer and printer attachment. You must set up your host environment before your printer will function correctly.

## ICA SDLC Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- The **Acceptable Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

→ The lower part of the worksheet lists configuration parameters that do not correspond to attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the host environment is set up properly for the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 33. ICA SDLC Attachment Configuration Worksheet*

| Printer Attachment Parameters | PSF Startup Procedure | VTAM Definitions | ICA Hardware Definition | Acceptable Values | Value to Use |
|---|---|---|---|---|---|
| Installed | | | | Yes or No | **Yes** |
| Encoding | | | NRZI | NRZI or NRZ | |
| Request to send | | | Permanent RTS | Controlled or Continuous | **Controlled** |
| Station Address | | PU ADDR | | 01 to FE | |
| XID Number | | | | 07100000 to FFFFFFFF | **7100000** |
| Remote Network Name | | NETID (ATCSTR00) | | Up to 8 characters | |
| SNA Intervention Timer | | | | 0 to 99 (Minutes) | |
| SDLC Type | | | Physical interface | EIA 232 or V.35 | |
| Local LU Name | LUNAME | LUNAME | | Up to 8 characters | |
| Remote LU Name | APPLID | APPLID | | Up to 8 characters | |
| Mode Name | | | | | **null (blank)** |
| Local Network Name[3] | | NETID (ATCSTR00) | | Up to 8 characters | |
| Control Point Name[3] | APPLID | APPLID | | Up to 8 characters | |
| SSCP ID | | SSCPID (ATCSTR00) | | 0000 to FFFF | |
| Local LU Address | | LOCADDR | | 0 to 255 | |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | |
| | PROC name | | | | |
| | LOGMODE | LOGMODE (LOGMODE table)<br>DLOGMOD (Major Node) | | | |
| | | RUSIZES (LOGMODE table) | | | **X'86F8'** |
| | | MAXDATA | | | **3849** |

**Notes:**

1. Complete the **Value To Use** column for all attachment parameters. For more information see "ICA SDLC Attachment Configuration" on page 191.
2. Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9.
3. If a value is entered for Local Network Name, then the Control Point Name must have a value.

*Table 34. ICA SDLC Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | PSF Startup Procedure | VTAM Definitions | ICA Hardware Definition | Acceptable Values | Value to Use |
|---|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> SDLC -> Configuration | | | | | |
| Encoding | | | NRZI | NRZI or NRZ | |
| Request to send | | | Permanent RTS | Controlled or Continuous | **Controlled** |
| Station Address | | PU ADDR | | 01 to FE | |
| XID Number | | | | 07100000 to FFFFFFFF | **7100000** |
| Remote Network Name | | NETID (ATCSTR00) | | Up to 8 characters | |
| SNA Intervention Timer | | | | 0 to 99 (Minutes) | |
| SDLC Type | | | Physical interface | EIA 232 or V.35 | |
| Local LU Name | LUNAME | LUNAME | | Up to 8 characters | |
| Remote LU Name | APPLID | APPLID | | Up to 8 characters | |
| Mode Name | | | | | **null (blank)** |
| Local Network Name[3] | | NETID (ATCSTR00) | | Up to 8 characters | |
| Control Point Name[3] | | | | Up to 8 characters | |
| SSCP ID | | SSCPID (ATCSTR00) | | 0000 to FFFF | |
| Local LU Address | | LOCADDR | | 0 to 255 | |
| Auto Start | | | | Yes or No | |
| Solicit SSCP | | | | Yes or No | **YES** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | |
| Source Attachment | | | | | **SNA SDLC** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | |
| Enable IPDS | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | |
| | PROC name | | | | |
| | LOGMODE | LOGMODE (LOGMODE table)<br>DLOGMOD (Major Node) | | | |
| | | RUSIZES (LOGMODE table) | | | **X'86F8'** |
| | | MAXDATA | | | **3849** |

**Notes:**

1. Complete the **Value To Use** column for all attachment parameters. For more information see "ICA SDLC Attachment Configuration" on page 191.
2. Names can be one to eight characters. 0–9, A – Z, $, #, and @ are permitted, but the first character cannot be 0–9.
3. If a value is entered for Local Network Name, then the Control Point Name must have a value.

## ICA SDLC Attachment Configuration

Figure 65 shows a sample SDLC attachment configuration for a V.24/19.2Kb line. For a V.35/56Kb line, specify SDLC Type as **V.35**

The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. Only the Station Address parameter applies to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 193 for a description of parameters unique to the 3130 Release 2.

```
Installed                    Yes
Encoding                     NRZI
Request to send              Controlled
Station Address              C1
XID Number                   7100000
Remote Network Name          USIBMBQ
SNA Intervention Timer       99
SDLC Type                    EIA 232
Local LU Name                LU3935
Remote LU Name               PSFFSA1
Mode Name
Local Network Name           USIBMBQ
Control Point Name           PSFFSA1
SSCP ID                      0000
Local LU Address             1
```

*Figure 65. SDLC Attachment Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Install Status** | Specify **Installed**. |
| **Encoding** | Specifies the type of data encoding used to transmit data over the data link. The value can be NRZ or NRZI, and it must correspond to the Non Return to Zero Inverted setting in the hardware configuration.<br>If you explicitly specify NRZI=0 in the ICA, set Encoding to NRZ. Otherwise, set Encoding to NRZI. |
| **Request to send** | Specifies how the link uses the RTS (request to send) signal when the remote and local modems are connected.<br>Newer modems can be set to continuous or controlled. Older modems may be set (or jumpered) to continuous or controlled. Check your modem documentation for details. |
| **Station Address** | Defines the destination address that other systems use to send information to the local physical unit (PU).<br>The value you specify for Station Address should match the value you specify for the PU ADDR= statement in the VTAM node (see topic 194). |
| **XID Number** | An ID that distinguishes a specific piece of equipment from all other similar pieces of equipment on the network.<br>Set this value to **07100000**. |
| **Remote Network Name** | Identifies the network name associated with the remote logical unit. The value you specify for Remote Network Name must match the NETID parameter in the ATCSTR00 Data Set (see topic 112). |

| Printer Attachment Parameter | Notes |
|---|---|
| **SNA Intervention Timer** | This timer defines how many minutes the printer waits before notifying the host that an attachment is not operating. The delay provides time to fix the problem at the printer without having an alert sent to the host. The timer can be set from 0 to 98 minutes. To turn the timer off, specify 99. |
| **SDLC Type** | Specify SDLC type as follows:<br>• For a V.24/19.2Kb line, specify **EIA 232**<br>• For a V.35/56Kb line, specify **V.35** |
| **Local LU Name** | The name of the local logical unit. The value you specify for Local LU Name must match:<br>• The name on the LU statement in the VTAM node (see topic 194).<br>• The value on the LUNAME= statement in the PSF Startup Procedure (see topic 106). |
| **Remote LU Name** | The name of the remote logical unit. The value you specify for Remote LU Name must match:<br>• The APPLID on the VTAM application definition.<br>• The value on the APPLID statement in the PSF Startup Procedure (see topic 106). |
| **Mode Name** | Mode name should be null (blank). |
| **Local Network Name** | The name of the network the printer is attached to. If the printer is in the same network as the host system, you can use the same value you specified for the Remote Network Name. |
| **Control Point Name** | The printer control point name. The Control Point Name must be a unique address.<br>**For printers other than the 3130 Release 2**, you can specify the control point name in the attachment configuration, or in a VTAM definition. If you specify Control Point Name in the attachment configuration, it must match:<br>• The APPLID on the VTAM application definition.<br>• The APPLID in the PSF Startup Procedure (see topic 106).<br>**For the 3130 Release 2**, Control Point Name is not used; however, it must not be blank and it must not match the APPLID. Instead, specify a unique value such as PRT1 or PRT2. |
| **SSCP ID** | Specifies the ID of the controlling system services control point in the SNA network. Although the SSCP Identifier is 12 digits, you specify only the last four digits in the attachment configuration. The printer automatically sets the first eight digits to 0500 0000.<br>This value must be the hexadecimal equivalent of the decimal value on the SSCPID statement in the ATCSTR00 data set (see topic 112).<br>The printer uses this ID to send information to the host system's Netview Programs. If the host does not use Netview, or the SNA Intervention Timer is set to 99, set SSCP ID to **0**. |
| **Local LU Address** | The destination address used by other systems to send information to the local logical unit. The value you specify for Local LU Address must match the LOCADDR parameter on the LU statement in the VTAM node (see topic 194). |

### 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **SNA SDLC**. |
| **Enable IPDS** | Specify **ENABLED.**<br><br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |
| **Solicit SSCP** | This parameter should be set for **YES** except for OS/400 V2R2 and V2R3 environments. |

## VTAM LOGMODE Table - ICA SDLC

Figure 66 shows a sample VTAM LOGMODE Table for an ICA SDLC attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
IBM3935  MODEENT LOGMODE=IBM3935,FMPROF=X'13',TSPROF=X'07',          X
               PRIPROT=X'B0',SECPROT=X'B0',                          X
               COMPROT=X'D0B1',RUSIZES=X'86F8',                      X
               PSERVIC=X'060200000000000000002000',                  X
               PSNDPAC=X'03',SRCVPAC=X'03',                          X
               SSNDPAC=X'00'
*
```

*Figure 66. VTAM LOGMODE Table (Partial, SDLC)*

| Field | Notes |
|---|---|
| **LOGMODE** | The value you specify for LOGMODE must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The name on the DLOGMOD parameter in the NCP definition. |
| **RUSIZES** | For maximum performance, specify **X'86F8'**. |

## VTAM Node for ICA SDLC

Figure 67 shows information you need to add to your VTAMLST. Highlighted values are required or recommended, or they must match another configuration value.

The following example is for a V.24/19.2Kb line or a V.35/56Kb line.

```
VTMCA1  VBUILD TYPE=CA
GRPLSDLC GROUP LNCTL=SDLC                                          C
               DIAL=NO                                             C
               ISTATUS=ACTIVE
*
*
LNKB4001 LINE  ADDRESS=B40,                                        C
               MAXBFRU=(2,8),ISTATUS=ACTIVE
DPI00101 PU    ADDR=C1,                                            C
               PUTYPE=2,MAXDATA=3849
*
LNKB4001 LU    LOCADDR=1,                                          C
               DLOGMOD=IBM3935,                                    C
               MODETAB=IESINCLM,                                   C
               PACING=0,VPACING=0,                                 C
               ISTATUS=ACTIVE,SSCPFM=USSSCS
```

*Figure 67. ICA VTAM Node for SDLC*

| Field | Notes |
|---|---|
| **ADDR** | The value of this parameter must match the value on the Station Address parameter in the SDLC attachment configuration. |
| **MAXDATA** | Specify **3849** for maximum performance. |
| **LOCADDR** | The value you specify for LOCADDR must match the Local LU Address parameter in the SDLC attachment configuration. |
| **DLOGMOD** | The value you specify for DLOGMOD must match:<br>• The value you specify for the LOGMODE statement in the PSF Startup Procedure.<br>• The value you specify for the LOGMODE statement in the VTAM LOGMODE table. |

## 9221 Hardware Configurations

Figure 68 shows sample communication line descriptions for a 9221 ICA SDLC configuration.

Set up your ports with Path, Address, Protocol, and Physical Interface to match your IOCDS definitions, for either RS232 at 19.2Kb or V.35 at 56Kb.

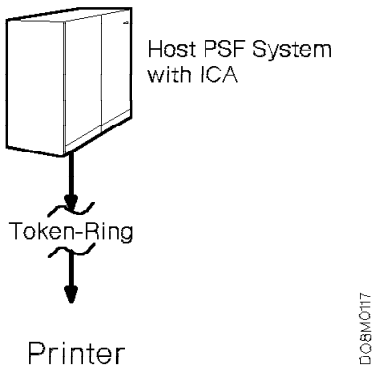
```
   Protocol - SDLC    Physical Interface - RS232

Line speed.....................................19200
Non return to zero inverted.(1 yes, 0 no)......1
Switched line.(0 leased, 1 switched)...........0
V.25 bis..(0 disable, 1 enable)................0
Permanent request to send.(1 perm, 0 switch)...1
Clocking (0-DTE, 1-DCE)........................1
Select standby.(1 Enable, 0 disable)...........0
Data rate select (0-Full, 1-Half)..............0
Data Set Ready Enable Timeout..................3
Clear to Send Monitor.(1 enable, 0 disable).....1
Line utilization threshold percentage..........60

   Protocol - SDLC    Physical Interface - V.35

Line speed.....................................56000
Non return to zero inverted.(1 yes, 0 no)......1
Permanent request to send.(1 perm, 0 switch)...1
Line utilization threshold percentage..........60
Clear to Send Monitor.(1 enable, 0 disable).....1
```

*Figure 68. 9221 Hardware Configuration (SDLC)*

## IOCDS for 9221 ICA SDLC

```
 ID  MSG1='ESA-NEW ',MSG2='THIS IS THE FIRST 9221 150 VSE ESA SYSTEM', *
               SYSTEM=(9221,1)
*** ---- I/O CONTROLLER - 6251 - AT CHANNEL - 0B -
 CHPID PATH=((0B,0B,0)),TYPE=IOC
 CNTLUNIT CUNUMBR=0C0F,PATH=(0B),SHARED=N,                              *
               UNITADD=((00,256)),                                      *
               UNIT=6251
 IODEVICE ADDRESS=(0B00,064),CUNUMBR=(0C0F),UNITADD=00,                 *
               UNIT=6251
 IODEVICE ADDRESS=(0B40,001),CUNUMBR=(0C0F),UNITADD=40,                 *
               UNIT=ICA,MODEL=SD
 IODEVICE ADDRESS=(0B41,001),CUNUMBR=(0C0F),UNITADD=41,                 *
               UNIT=ICA,MODEL=SD
 IODEVICE ADDRESS=(0B42,190),CUNUMBR=(0C0F),UNITADD=42,                 *
               UNIT=6251
```

# Chapter 16. ICA Token-Ring Attachment (VM and VSE Only)




*ICA Token-Ring Attachment*

## Chapter Overview

The Integrated Communications Adapter (ICA) is a communications controller that is part of any 937x or 9221 host system. ICA is supported only by VSE and VM.

The following list describes tasks you need to do before you can use your printer and ICA token-ring attachment:

**Tasks described in this chapter:**

- Complete the worksheet for your printer.
- Update the VTAM LOGMODE table. See "VTAM LOGMODE Table (ICA)" on page 205.
- Update the VTAM Major Node definition. See "VTAM Nodes (ICA)" on page 206.

**Tasks described in other chapters:**

- Update the startup procedure for your host system:
  - "PSF/VSE Startup Procedure" on page 109
  - "PSF/VM PDM Definition" on page 110
- Update the following VTAM definitions, including:
  - "Member ATCCON00" on page 111
  - "VTAM APPLID" on page 111
  - "ATCSTR00 Data Set" on page 112

**Tasks described in other books:**

- Configure the ICA. For information on how to do this, see the hardware configuration documentation for your 937x or 9221.

**Important**—You must complete the worksheet before the customer engineer installs the printer and printer attachment. You must set up your host environment before your printer will function correctly.

## ICA Token-Ring Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- The **Acceptable Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

→ The lower part of the worksheet lists configuration parameters that do not correspond to attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the host environment is set up properly for the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 35. Token-Ring SNA - ICA Attachment Configuration Worksheet*

| Printer Attachment Parameters | ICA Hardware Descriptions | PSF Startup Procedure | VTAM Definitions | Acceptable Values | Value to Use |
|---|---|---|---|---|---|
| Installed | | | | Yes or No | **Yes** |
| XID Number | | | IDBLK, IDNUM (SWNET Node) | 07100000 to FFFFFFFF | **071_____** |
| Remote Network Name | | | NETID (ATCSTR00) | Up to 8 characters | |
| SNA Intervention Timer | | | | 0 to 99 (Minutes) | |
| Local LU Name | | LUNAME | Name of LU (SWNET Node) | Up to 8 characters | |
| Remote LU Name | | APPLID | APPLID | Up to 8 characters | |
| Mode Name | | | | | **null (blank)** |
| Remote Address | Node Address | | MACADDR (Major Node) | 400000000000 to 7FFFFFFFFFF | |
| Local Network Name[4] | | | NETID (ATCSTR00) | Up to 8 characters | |
| Control Point Name[4] | | APPLID | APPLID | Up to 8 characters | |
| Alternate Address | | | DIALNO or MACADDR (SWNET Node) | 400000000000 to 7FFFFFFFFFF | |
| Ring Speed (Mbps) | Line Speed | | | 4 or 16 | |
| SSCP ID | | | SSCPID (ATCSTR00) | 0000 to FFFF | |
| Local LU Address | | | LOCADDR (SWNET Node) | 0 to 255 | |
| Call Type | | | | Call or Listen | |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | |
| | | LOGMODE | LOGMODE (LOGMODE table) DLOGMOD (SWNET Node) | | |
| | | | CALL (Major Node) | | **INOUT** |
| | | | DIAL (Major Node) | | **YES** |
| | | | LOGAPPL (SWNET Node) APPLID | | |
| | | | MAXDATA (SWNET Node) | | **1033** |
| | | | RUSIZES (LOGMODE table) | | **X'8787'** |

**Notes:**

1. Complete the **Value To Use** column for all attachment parameters. For more information see "ICA Token-Ring Attachment Configuration" on page 202.
2. Names can be one to eight characters. 0–9, A – Z, $, #, and @ are permitted, but the first character cannot be 0–9.
3. If a value is entered for the Local Network Name, then the Control Point Name must have a value.

*Table 36 (Page 1 of 2). Token-Ring SNA - ICA Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | ICA Hardware Descriptions | PSF Startup Procedure | VTAM Definitions | Acceptable Values | Value to Use |
|---|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Protocols | | | | | |
| Enable SNA | | | | Enable or Disable | **Enable** |
| Enable TCP/IP | | | | Enable or Disable | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> Address | | | | | |
| Alternate Address | | | DIALNO or MACADDR (SWNET Node) | 400000000000 to 7FFFFFFFFFFF | |
| MAC Address | | | | | Display only |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration | | | | | |
| Auto Start | | | | Yes or No | |
| Ring Speed (Mbps) | Line Speed | | | 4 or 16 | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> SNA | | | | | |
| XID Number | | | IDBLK, IDNUM (SWNET Node) | 07100000 to FFFFFFFF | **071**_____ |
| Remote Network Name | | | NETID (ATCSTR00) | Up to 8 characters | |
| SNA Intervention Timer | | | | 0 to 99 (Minutes) | |
| Local LU Name | | LUNAME | Name of LU (SWNET Node) | Up to 8 characters | |
| Remote LU Name | | APPLID | APPLID | Up to 8 characters | |
| Mode Name | | | | | **null (blank)** |
| Remote Address | Node Address | | MACADDR (Major Node) | 400000000000 to 7FFFFFFFFFFF | |
| Local Network Name[4] | | | NETID (ATCSTR00) | Up to 8 characters | |
| Control Point Name[4] | | | CPNAME (Major Node) | Up to 8 characters | |
| SSCP ID | | | SSCPID (ATCSTR00) | 0000 to FFFF | |
| Local LU Address | | | LOCADDR (SWNET Node) | 0 to 255 | |
| Call Type | | | | Call or Listen | |
| Solicit SSCP | | | | Yes or No | **YES** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | |
| Source Attachment | | | | | **SNA TOKEN RING** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | |
| Enable IPDS | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | |
| | | LOGMODE | LOGMODE (LOGMODE table) DLOGMOD (SWNET Node) | | |
| | | | CALL (Major Node) | | **INOUT** |
| | | | DIAL (Major Node) | | **YES** |

*Table 36 (Page 2 of 2). Token-Ring SNA - ICA Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | ICA Hardware Descriptions | PSF Startup Procedure | VTAM Definitions | Acceptable Values | Value to Use |
|---|---|---|---|---|---|
| | | | LOGAPPL (SWNET Node) APPLID | | |
| | | | MAXDATA (SWNET Node) | | **1033** |
| | | | RUSIZES (LOGMODE table) | | **X′8787′** |

**Notes:**

1. Complete the **Value To Use** column for all attachment parameters. For more information see "ICA Token-Ring Attachment Configuration" on page 202.
2. Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9.
3. If a value is entered for the Local Network Name, then the Control Point Name must have a value.

## ICA Token-Ring Attachment Configuration

Figure 69 shows a sample configuration for a ICA token-ring attachment. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 204 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
XID number:                 7100021
Remote network name:        USIBMBQ
SNA Intervention Timer:     99
Local LU name:              LU3935
Remote LU name:             PSFFSA1
Mode name:
Remote address:             400010150003
Local network name:         USIBMBQ
Control point name:         PSFFSA1
Alternate address:          400020050089
Ring speed:                 16
SSCP ID:                    0000
Local LU address:           1
Call Type:                  Call
```

*Figure 69. ICA Token-Ring Attachment Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Install Status** | Specify **Yes**. |
| **XID Number** | An ID that distinguishes a specific piece of equipment from all other similar pieces of equipment on the network.<br><br>The first three digits must be **071** and must match the IDBLK value in the VTAM SWNET Node Definition (see topic 206). The last five digits must match the IDNUM value in the VTAM SWNET Node Definition. |
| **Remote Network Name** | The name of the network that the host belongs to. The value you specify for Remote Network Name must match the NETID parameter in the ATCSTR00 data set (see topic 112). |
| **SNA Intervention Timer** | This timer defines how many minutes the printer waits before notifying the host that an attachment is not operating. The delay provides time to fix the problem at the printer without having an alert sent to the host. The timer can be set from 0 to 98 minutes. To turn the timer off, specify 99. |
| **Local LU Name** | The name of the local logical unit. The value you specify for Local LU Name must match:<br><br>• The name on the LU statement in the VTAM SWNET Node definition (see topic 206).<br>• The value on the LUNAME statement in the PSF Startup Procedure (see topic 106). |

| Printer Attachment Parameter | Notes |
|---|---|
| **Remote LU Name** | The name of the remote logical unit. The value you specify for Remote LU Name must match:<br>• The VTAM APPLID (see topic 111).<br>• The APPLID in the PSF Startup Procedure (see topic 106). |
| **Mode Name** | Mode name should be null (blank). |
| **Remote Address** | The remote host token-ring adapter card address. The value you specify for Remote Address must match:<br>• The Node Address in the ICA configuration (see topic 210).<br>• The MACADDR value on the PORT statement in the Major Node definition (see topic 206). |
| **Local Network Name** | The name of the network the printer is attached to. If the printer and the host are in the same network, the Local Network Name should be the same as the Remote Network Name. |
| **Control Point Name** | The printer control point name. The Control Point Name must be a unique address on the token ring.<br>**For printers other than the 3130 Release 2**, you can specify the control point name in the attachment configuration, or in a VTAM definition. If you specify Control Point Name in the attachment configuration, it must match:<br>• The VTAM APPLID (see topic 111).<br>• The APPLID in the PSF Startup Procedure (see topic 106).<br>**For the 3130 Release 2**, Control Point Name should match the CPNAME value in the VTAM SWNET Node definition (see topic 206). |
| **Alternate Address** | Sets the LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. If you set the Call Type parameter to Listen, the value you specify for Alternate Address must match:<br>• The DIALNO value on the PATH statement in the VTAM SWNET Node definition (see topic 206).<br>• The MACADDR value on the PU statement in the VTAM SWNET Node definition (see topic 206). |
| **Ring Speed** | The ring speed of the network the adapter is attached to. The value you specify for Ring Speed must match The Ring Speed in the ICA configuration (see topic 210). the corresponding value in the ICA configuration. Specifying the wrong value can cause the network to stop operating. |
| **SSCP ID** | Specifies the ID of the controlling system services control point in the SNA network. Although the SSCP Identifier is 12 digits, you specify only the last four digits in the attachment configuration. The printer automatically sets the first eight digits to 0500 0000.<br>This value must be the hexadecimal equivalent of the decimal value on the SSCPID statement in the ATCSTR00 data set (see topic 112).<br>The printer uses this ID to send information to the host system's Netview Programs. If the host does not use Netview, or the SNA Intervention Timer is set to 99, set SSCP ID to **0**. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Local LU Address** | The destination address used by other systems to send information to the local logical unit. The value you specify for Local LU Address must match the LOCADDR parameter on the LU statement in the VTAM SWNET Node definition (see topic 206). |
| **Call Type** | Specifies how the host and printer make contact. There are two settings: Call and Listen.<br>• If you set Call Type to **Call**, the printer initiates contact with the host. The LOGAPPL statement in the VTAM SWNET Node definition (see topic 206) must specify the VTAM APPLID (see topic 111).<br>• If you set Call Type to **Listen**, the printer waits, or "listens," for calls from the host. The last twelve digits on the DIALNO statement in the VTAM SWNET Node definition (see topic 206) must match the value you specify for Alternate Address. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Enable SNA** | Specifies whether the token ring is enabled or disabled for SNA. Specify **Enabled** (the default value). |
| **Enable TCP/IP** | Specifies whether the token ring is enabled or disabled for TCP/IP. The default is **Enabled**. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. You can use the MAC address for the printer's alternate address. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **SNA Token Ring**. |
| **Enable IPDS** | Specify **ENABLED.**<br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |
| **Local LU Name** | **Note:** For the 3130 Release 2, Local LU name entered at the printer must not match the Remote LU Name entered at the printer, and must not match the control point name entered at the printer. |
| **Solicit SSCP** | This parameter should be set to **YES** except for OS/400 V2R2 and V2R3 environments. |

## VTAM LOGMODE Table (ICA)

Figure 70 shows a sample VTAM LOGMODE Table for an ICA token-ring attachment. Highlighted values are required or recommended, or they must match another configuration value.

```
IBM3935  MODEENT LOGMODE=IBM3935,FMPROF=X'13',TSPROF=X'07',            X
               PRIPROT=X'B0',SECPROT=X'B0',                            X
               COMPROT=X'D0B1',RUSIZES=X'8787',                        X
               PSERVIC=X'060200000000000000002000',                    X
               PSNDPAC=X'03',SRCVPAC=X'03',                            X
               SSNDPAC=X'00'
*
```

*Figure 70. VTAM LOGMODE (Partial, ICA)*

| Field | Notes |
|---|---|
| **LOGMODE** | The value you specify for LOGMODE must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The name on the DLOGMOD parameter in the VTAM SWNET Node definition. |
| **RUSIZES** | For maximum performance, specify **X'8787'** |

## VTAM Nodes (ICA)

This section shows two sample definitions:

- Figure 71 shows a sample node definition for Call Type=Listen.
- Figure 72 on page 208 shows a sample node definition for Call Type=Call.

The primary difference between the two definitions is that the Call Type=Listen definition includes a DIALNO statement, whereas the Call Type=Call definition includes a LOGAPPL statement. In both figures, highlighted values are required or recommended, or they must match another configuration value.

```
TLN301  VBUILD TYPE=LAN
TRP301  PORT   CUADDR=300,                                          C
               MACADDR=400010150003,                                C
               LANCON=(02.0,5),                                     C
               MAXDATA=2012,                                        C
               MAXSTN=8,                                            C
               SAPADDR=4
TRG301   GROUP LNCTL=SDLC,                                          C
               DIAL=YES
L300201  LINE  CALL=INOUT,ISTATUS=ACTIVE
DPT00201 PU    ISTATUS=ACTIVE
L300202  LINE  CALL=IN,ISTATUS=ACTIVE
DPT00202 PU    ISTATUS=ACTIVE

************************************************************************

TSW301  VBUILD TYPE=SWNET,                                          C
               MAXGRP=1,                                            C
               MAXNO=1
*
*    CALL OUT NODE
DPT00201 PU    ADDR=C1,MACADDR=400020050089,                        C
               LANSW=YES,                                           C
               IDBLK=071,                                           C
               IDNUM=00001,                                         C
               DISCNT=NO,                                           C
               CPNAME=PRT006,                                       C
               ISTATUS=ACTIVE,PACING=0,                             C
               PUTYPE=2,                                            C
               MAXDATA=1033,                                        C
               MAXPATH=4,                                           C
               LANACK=(10.0,2),                                     C
               LANINACT=25.5,                                       C
               LANCON=(15.0,5),                                     C
               LANSDWDW=(2,1),                                      C
               LANRESP=(24.4,9),                                    C
               SAPADDR=4
FOR3935  PATH  GRPNM=TRG301,                                        C
               DIALNO=0004400020050089
LU3935 LU      LOCADDR=1,DLOGMOD=IBM3935,                           C
               ISTATUS=ACTIVE,MODETAB=IESIBCLM,                     C
               SSCPFM=USSSCS
```

*Figure 71. VTAM Node Definition (ICA, Call Type=Listen)*

| Field | Notes |
|---|---|
| **MACADDR (PORT)** | This value must match:<br>• The Remote Address parameter in the token-ring attachment configuration.<br>• The Node Address specified in the ICA hardware configuration. |
| **DIAL** | This value must be **YES**. |
| **CALL** | This value must be **INOUT**. |
| **IDBLK** | Specify **071**. |
| **IDNUM** | This value must match the last five digits of the XID Number parameter in the token-ring attachment configuration. |
| **CPNAME** | For the 3130 Release 2, this value must match the Control Point Name parameter in the token-ring attachment configuration. |
| **DIALNO** | The last twelve digits of this value must match the Alternate Address parameter in the token-ring attachment configuration. |
| **MACADDR (PU)** | This value must match the Alternate Address parameter in the token-ring attachment configuration. |
| **LU name** | The LU name (LU3935 in this example) must match:<br>• The value on the LUNAME statement in the PSF Startup Procedure<br>• The Local LU Name parameter in the token-ring attachment configuration. |
| **LOCADDR** | This value must match the Local LU Address parameter in the token-ring attachment configuration. |
| **DLOGMOD** | The value you specify for DLOGMOD must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The LOGMODE parameter on the MODEENT statement in the VTAM LOGMODE table. |

```
TLN301  VBUILD TYPE=LAN
TRP301  PORT   CUADDR=300,                                          C
               MACADDR=400010150003,                                C
               LANCON=(02.0,5),                                     C
               MAXDATA=2012,                                        C
               MAXSTN=8,                                            C
               SAPADDR=4
TRG301   GROUP LNCTL=SDLC,                                          C
               DIAL=YES
L300201  LINE  CALL=INOUT,ISTATUS=ACTIVE
DPT00201 PU    ISTATUS=ACTIVE
L300202  LINE  CALL=IN,ISTATUS=ACTIVE
DPT00202 PU    ISTATUS=ACTIVE

*********************************************************************

CTRG3172 VBUILD TYPE=SWNET,MAXGRP=1,MAXNO=1
*
*    CALL IN  NODE
DPT00202 PU    ADDR=C1,MACADDR=400020050090,                        C
               LANSW=YES,                                           C
               IDBLK=071,                                           C
               IDNUM=00021,                                         C
               CPNAME=PRT006,                                       C
               DISCNT=NO,                                           C
               ISTATUS=ACTIVE,PACING=0,                             C
               PUTYPE=2,                                            C
               MAXDATA=1033,                                        C
               LANACK=(10.0,2),                                     C
               LANINACT=25.5,                                       C
               LANCON=(15.0,5),                                     C
               LANSDWDW=(2,1),                                      C
               LANRESP=(24.4,9),                                    C
               SAPADDR=4
LU3935   LU    LOCADDR=1,DLOGMOD=IBM3935,                           C
               ISTATUS=ACTIVE,MODETAB=IESINCLM,                     C
               SSCPFM=USSSCS,LOGAPPL=PSFFSA1
```

*Figure 72. VTAM Node Definition (ICA, Call Type=Call)*

| Field | Notes |
|---|---|
| **MACADDR (PORT)** | This value must match:<br>• The Alternate Address parameter in the token-ring attachment configuration.<br>• The Node Address specified in the ICA hardware configuration. |
| **DIAL** | This value must be **YES**. |
| **CALL** | This value must be **INOUT**. |
| **IDBLK** | Specify **071**. |
| **IDNUM** | This value must match the last five digits of the XID Number parameter in the token-ring attachment configuration. |
| **CPNAME** | For the 3130 Release 2, this value must match the Control Point Name parameter in the token-ring attachment configuration. |
| **LU name** | The LU name (LU3935 in this example) must match:<br>• The value on the LUNAME statement in the PSF Startup Procedure<br>• The Local LU Name parameter in the token-ring attachment configuration. |

| Field | Notes |
|---|---|
| **LOCADDR** | This value must match the Local LU Address parameter in the token-ring attachment configuration. |
| **LOGAPPL** | LOGAPPL must match the name of the APPLID. |
| **DLOGMOD** | The value you specify for DLOGMOD must match:<br>• The value you specify on the LOGMODE statement in the PSF Startup Procedure.<br>• The LOGMODE parameter on the MODEENT statement in the VTAM LOGMODE table. |

## 9221 Hardware Configurations

Figure 73 shows sample communication line descriptions for a 9221 ICA token-ring configuration.

Set up your ports with Path, Address, Protocol, and Physical Interface to match your IOCDS definitions.

```
Address.....................................00 - 0B
Users.......................................3
Node Address (hexadecimal).....................400010150003
Inactivity Timer(30-32767, 100 millisec units)..300
Enable Ring Error Monitor (0=NO 1=YES).........0
Ring Speed.....................................16mps
Disable Early Token Release (0=No 1=YES)........0
```

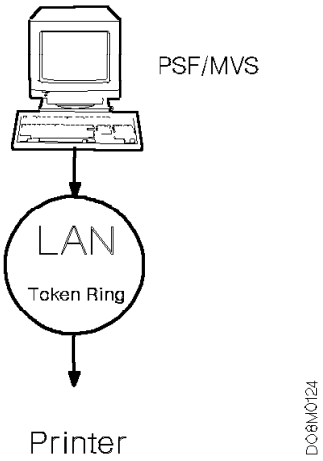
*Figure 73. 9221 Hardware Configuration (Token Ring)*

## IOCDS for 9221 ICA SDLC

```
 ID  MSG1='ESA-NEW ',MSG2='THIS IS THE FIRST 9221 150 VSE ESA SYSTEM', *
               SYSTEM=(9221,1)
*** ---- I/O CONTROLLER - 6140 - AT CHANNEL - 03 -
 CHPID PATH=((03,03,0)),TYPE=IOC
 CNTLUNIT CUNUMBR=0C0B,PATH=(03),SHARED=N,                            *
               UNITADD=((00,256)),                                    *
               UNIT=6140
 IODEVICE ADDRESS=(0300,012),CUNUMBR=(0C0B),UNITADD=00,               *
               UNIT=ILANS,MODEL=TR
 IODEVICE ADDRESS=(030C,244),CUNUMBR=(0C0B),UNITADD=0C,               *
               UNIT=6140
```

# MVS TCP/IP Attachments

# Chapter 17. PSF/MVS Token-Ring TCP/IP Attachment




*PSF/MVS Token-Ring TCP/IP Attachment*

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and token-ring TCP/IP attachment:

- Ask your LAN administrator for the following:
  - IP address
  - Subnet mask
  - Default gateway address
- Complete the worksheet for your printer.
- Update the MVS printer definitions. See "MVS Printer Definitions" on page 222.
- Update the MVS startup procedure for your host system. See "PSF/MVS Startup Procedure" on page 222.
- Modify the TCP/IP Profile in MVS. See "Modifying the TCP/IP Profile in MVS" on page 225.

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host. See "Requirements for Using a TCP/IP-Attached IPDS Printer" on page 216.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

For more information about requirements, refer to:

- "Requirements for Using a TCP/IP-Attached IPDS Printer" on page 216
- Chapter 1, "Read This Chapter First" on page 1
- *Advanced Function Presentation: Printer Information*, G544-3290
- The Introduction and Planning Guide for your printer

## Requirements for Using a TCP/IP-Attached IPDS Printer

To print on TCP/IP-attached IPDS printers through PSF, you need the following software:

- PSF/MVS Version 2 Release 2.0 with APAR OW15599.
- MVS Scheduler APAR OW12236 to support two new PRINTDEV keywords: IPADDR and PORTNO.
- TCP/IP Version 3 Release 1, or higher, installed and configured on MVS.

  **Note:** The TCP/IP address space name must be set to **TCPIP**, which is the default at installation.

## PSF/MVS Token-Ring TCP/IP Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets list the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If the **Attachment Parameter** and the **PSF/MVS Value** columns list a parameter on the same line, the values you specify for those parameters must be the same.
- The **Available Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended. More requirements regarding parameter values are described in the next section.

## Attachment Worksheet (Not for 3130 Release 2)

*Table 37. PSF/MVS Token-Ring TCP/IP Attachment Configuration Worksheet*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | MVS TCP/IP Profile | Available Values | Value to Use |
|---|---|---|---|---|---|
| Install Status | | | | Yes or No | **Yes** |
| TCP Port | | | | 5001 to 65536 | |
| IP Address | | IPADDR | | X.X.X.X where X <= 255 | |
| Subnet Mask | | | | X.X.X.X where X <= 255 | |
| Default Gateway Address | | | | X.X.X.X where X <= 255 | |
| MTU Size | | | GATEWAY (Packet_size) | 60 to 4096 | |
| Ring Speed (Mbps) | | | | 4 or 16 | |
| Confine Broadcast | | | | Yes or No | |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | |
| | PROC(JES2), JNAME(JES3), PNAME(JES3) | PROC name | | | |

*Table 38 (Page 1 of 2). PSF/MVS Token-Ring TCP/IP Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | MVS TCP/IP Profile | Available Values | Value to Use |
|---|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> TCP/IP System | | | | | |
| Printer Name[1] | | | | 1-16 characters | |
| Name Server IP Address[1] | | | | X.X.X.X where X <=255 | |
| Domain Name[1] | | | | 1-32 characters | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration Protocols | | | | | |
| Enable SNA | | | | Enable or Disable | |
| Enable TCP/IP | | | | Enable or Disable | |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration -> Address | | | | | |
| Alternate Address | | | | 4000 0000 0000 to 7FFF FFFF FFFF | |
| MAC Address | | | | | Display Only |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration | | | | | |
| Auto Start | | | | Yes or No | |
| Ring Speed (Mbps) | | | | 4 or 16 | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> TCP/IP | | | | | |
| IP Address | | IPADDR | | X.X.X.X where X <=255 | |
| Subnet Mask | | | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | | X.X.X.X where X <=255 | |
| MTU Size | | | GATEWAY (Packet_size) | 60 to 4096 | |
| Confine Broadcast | | | | Yes or No | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | |
| Source Attachment | | | | | **TCP/IP Token-Ring** |
| IPDS TCP Port Number | | | | 5001 to 65536 | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | |

*Table 38 (Page 2 of 2). PSF/MVS Token-Ring TCP/IP Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | MVS TCP/IP Profile | Available Values | Value to Use |
|---|---|---|---|---|---|
| Enable IPDS | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | |
| | PROC(JES2),<br>JNAME(JES3),<br>PNAME(JES3) | PROC name | | | |

**Notes:**

1. Printer Name, Name Server IP Address, and Domain Name apply only when you use FTP, TFTP, or LPR to send ASCII jobs to the printer.

## PSF/MVS Token Ring TCP/IP Configuration

Figure 74 shows a sample configuration for a PSF/MVS token-ring TCP/IP configuration. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 221 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
TCP Port:                   5001
IP address:                 9.99.5.120
Subnet mask:                255.255.255.128
Default gateway address:    9.99.5.1
MTU size:                   4096
Ring speed:                 4
Confine broadcast:          No
```

*Figure 74. PSF/MVS Token Ring TCP/IP Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **TCP port** | The TCP socket address of the attachment. Specify **5001**, the default value, for TCP/IP attached printers. |
| **IP address** | The Internet Protocol address of the printer in dotted decimal format.<br>You are assigned this value from your LAN administrator. It must be unique, and it must match the IPADDR value in the PSF/MVS Startup Procedure (see topic 222). |
| **Subnet mask** | The mask identifying the local subnet in dotted decimal format.<br>You must get this value from your LAN administrator. If there is no local subnet, leave this field blank. |
| **Default gateway address** | The IP address of the default gateway in dotted decimal format.<br>You must get this value from your LAN administrator. If there is no local gateway, leave this field blank. |
| **MTU size** | MTU (Maximum Transmission Unit) is the maximum allowable length of IP packets. The MTU size must match the MTU size specified by the host system that is sending jobs to the printer. It must also match the Gateway Packet_size value in the MVS TCP/IP profile (see topic 225). |
| **Ring speed** | The ring speed of the network the adapter attaches to. This value must match the speed of the network; an incorrect value can cause the network to stop operating. |
| **Confine broadcast** | A yes or no indication of whether broadcast packets—notably ARP (Address Resolution Protocol) packets—are enabled to cross bridges to other rings.<br>**Note:** Be sure to specify **NO** to allow ARP packets to cross bridges. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Default gateway address** | The IP address of the default gateway in dotted decimal format.<br><br>You must get this value from your LAN administrator. If there is no local gateway, leave this field blank. |
| **Printer name** | The name that identifies the printer in messages or mail generated for ASCII jobs, or when a user establishes an FTP session with the printer. The name can be up to 16 alphanumeric characters. The Printer Name cannot be blank; if you do not need a name or if the printer is for IPDS jobs only, use the default value.<br><br>This is also known as the **HOST NAME** or **SERVER NAME** in most TCP/IP environments.<br><br>The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Name server IP address** | The IP address of the name server in dotted decimal format. The name server allows the printer to recognize systems by name, rather than just by IP address. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Domain name** | The name of the domain the printer is in, up to 32 alphanumeric characters. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Enable SNA** | Specifies whether the token ring is enabled or disabled for SNA. The default is **Enabled**. |
| **Enable TCP/IP** | Specifies whether the token ring is enabled or disabled for TCP/IP. Specify **Enabled** (the default value). |
| **Alternate address** | The LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. You can use the MAC address for the printer′s alternate address. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **TCP/IP Token Ring**. |
| **IPDS TCP Port number** | The TCP socket address of the attachment. Specify **5001**, the default value, for TCP/IP attached printers.<br><br>**Note:** This parameter replaces the TCP Port parameter. |
| **Enable IPDS** | Specify **ENABLED.**<br><br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |

## MVS Printer Definitions

### JES2 Printer Definitions

Figure 75 shows the JES2 printer definition initialization member, located in the system parmlib.

```
FSSDEF FSSNAME=FSS3130,PROC=WRT3130,HASPFSSM=HASPFSSM
PRT3130  FSS=FSS1,MODE=FSS,PRMODE=(LINE,PAGE,SOSI1),
         CLASS=C,UCS=0,SEP,NOSEPDS,CKPTPAGE=100,
         DRAIN,MARK,TRKCELL=YES
```

*Figure 75. PSF/MVS JES2 Printer Definition*

**Note:** The above example is correct for JES2 1.3.6 and 2.1.0. For JES2 3.1.1 and above, the FSSNAME parameter is gone, and the FSSNAME is in parentheses after FSSDEF, as in FSSDEF(FSS1).

| Field | Notes |
|---|---|
| **PROC** | The value you specify on the PROC parameter must match the name on the PSF/MVS Startup Procedure. |

### JES3 Printer Definitions

Figure 76 shows an example of a JES3 printer definition. This example is NOT executable, but it is intended to help the JES3 system programmer define the printer to the MVS host.

```
FSSDEF,TYPE=WTR,FSSNAME=FSS3130,PNAME=WRT3130,SYSTEM=SYS1,TERM=NO
DEVICE,JNAME=PRT3130,JUNIT=(,SYS1,,OFF),FSSNAME=FSS3130,
       MODE=FSS,PM=(LINE,PAGE,SOSI1),CHARS=(YES,GT12),
```

*Figure 76. PSF/MVS JES3 Printer Definition*

| Field | Notes |
|---|---|
| **JNAME** | The value you specify on the JNAME parameter must match the name of the printer FSA on the PSF/MVS Startup Procedure. |
| **PNAME** | The value you specify on the PNAME parameter must match the name on the PSF/MVS Startup Procedure. |

## PSF/MVS Startup Procedure

Figure 77 on page 223 shows a sample startup procedure for PSF/MVS. Highlighted values are required or recommended, or they must match another configuration value. For more detailed information, see the *PSF/MVS System Programmer's Guide*.

```
//WRT3130 PROC
//STEP01   EXEC PGM=APSPPIEP,REGION=4096K
//JOBHDR OUTPUT PAGEDEF=V06483,     /* JOB SEPARATOR PAGEDEF        */
//       FORMDEF=A10110,CHARS=GT15  /* JOB SEPARATOR FORMDEF        */
//JOBTLR OUTPUT PAGEDEF=V06483,     /* JOB SEPARATOR PAGEDEF        */
//       FORMDEF=A10110,CHARS=GT15  /* JOB SEPARATOR FORMDEF        */
//DSHDR  OUTPUT PAGEDEF=V06483,     /* DS  SEPARATOR PAGEDEF        */
//       FORMDEF=A10110,CHARS=GT15  /* DS  SEPARATOR FORMDEF        */
//MSGDS  OUTPUT PAGEDEF=A06462,     /* MESSAGE DATASET PAGEDEF      */
//       FORMDEF=A10110             /* MESSAGE DATASET FORMDEF      */
//FONT01   DD   DSN=SYS1.FONTLIBB,  /* SYSTEM FONTS - 240 PEL       */
//         DISP=SHR
//         DD   DSN=SYS1.FONTOLN,   /* IBM Outline Fonts            */
//         DISP=SHR
//FONT02   DD   DSN=SYS1.FONT300,   /* SYSTEM FONTS - 300 PEL       */
//         DISP=SHR
//         DD   DSN=SYS1.FONTOLN,   /* IBM Outline Fonts            */
//         DISP=SHR
//PSEG01   DD   DSN=SYS1.PSEGLIB,   /* SYSTEM PAGE SEGMENTS         */
//         DISP=SHR
//OLAY01   DD   DSN=SYS1.OVERLIB,   /* SYSTEM MEDIUM OVERLAYS       */
//         DISP=SHR                 /*                              */
//PDEF01   DD   DSN=SYS1.PDEFLIB,   /* SYSTEM PAGEDEFS              */
//         DISP=SHR
//FDEF01   DD   DSN=SYS1.FDEFLIB,   /* SYSTEM FORMDEFS              */
//         DISP=SHR
//* ************************************************************     */
//*             PRINTDEV                                             */
//* ************************************************************     */
//PRT3130  CNTL
//PRT3130  PRINTDEV FONTDD=*.FONT01, /* 240 PEL FONT LIBRARY DD      */
//*                                  /* <-- SEE REQUIRED ACTIONS     */
//*                                  /*     ABOVE                    */
//*PRT3130  PRINTDEV FONTDD=*.FONT02, /* 300 PEL FONT LIBRARY DD     */
//*                                   /* <-- SEE REQUIRED ACTIONS    */
//*                                   /*     ABOVE                   */
//          OVLYDD=*.OLAY01,         /* OVERLAY  LIBRARY DD          */
//          PSEGDD=*.PSEG01,         /* SEGMENT  LIBRARY DD          */
//          PDEFDD=*.PDEF01,         /* PAGEDEF  LIBRARY DD          */
//          FDEFDD=*.FDEF01,         /* FORMDEF  LIBRARY DD          */
//          JOBHDR=*.JOBHDR,         /* JOB HEADER SEPARATOR OUTPUT  */
//          JOBTRLR=*.JOBTLR,        /* JOB TRAILER SEPARATOR OUTPUT */
//          DSHDR=*.DSHDR,           /* DATA SET HEADER SEOARATIR    */
//          MESSAGE=*.MSGDS,         /* MESSAGE DATA SET OUTPUT      */
//          BUFNO=5,                 /* NUMBER OF WRITE DATA BUFFERS */
//          PAGEDEF=A06462,          /* DEVICE PAGEDEF DEFAULT       */
//          FORMDEF=A10110,          /* DEVICE FORMDEF DEFAULT       */
//          CHARS=(GF10,             /* DEVICE                       */
//          GS10,TU10,GU10),         /* DEFAULT FONT SET             */
//          PIMSG=YES,               /* ACCUMULATE DATA SET MESSAGES */
//          DATACK=BLOCK,            /* REPORT ALL DATA-CHECK ERRPRS */
//          TRACE=NO,                /* CREATE INTERNAL TRACE        */
//          FAILURE=WCONNECT,        /* PSF ACTION ON PRINTER        */
//*                                  /*   FAILURE                    */
//          TIMEOUT=REDRIVE,         /* PSF ACTION ON TIMEOUT        */
//          MGMTMODE=IMMED,          /* PRINTER MANAGEMENT MODE      */
//*         MGMTMODE=OUTAVAIL,       /* 3130 R2 VALUE !!! (recommen- */
                                                ded for FSF sharing) */
//          DISCINTV=0,              /* DISCONNECT INTERVAL IN       */
//*         DISCINTV=5,              /* 3130 R2 VALUE !!! (Recommen- */
                                              for PSF Sharing)      */
//*                                  /*   SECONDS                    */
//          IPADDR='xxx.xxx.xxx.xxx' /* IP ADDRESS FOR TCP/IP        */
//          PORTNO='5001'            /* CIP PORT NUMBER              */
//PRT1      ENDCNTL
```

*Figure 77. PSF/MVS Sample Start Up Procedure (TCP/IP)*

| Field | Notes |
|---|---|
| **PROC name** | The procedure name (WRT3935 in the example) must match one of the following:<br>• The name on the PROC parameter of the FSSDEF statement in the JES2 printer definition.<br>• The name on the PNAME parameter of the FSSDEF statement in the JES3 printer definition. |
| **Printer FSA name** | The label you specify on the CNTL, PRINTDEV, and ENDCTL statements (PRT3130 in the example) must match the name on the JNAME parameter of the DEVICE statement in the JES3 printer definition. |
| **MGMTMODE** | Set the MGMTMODE value to **IMMED** or **OUTAVAIL**.<br>**Note:** For the 3130 Release 2, specify **OUTAVAIL**. |
| **DISCINTV** | For the 3130 Release 2, specify **5** or **10** seconds. For other printers, specify **0**. |
| **IPADDR** | IPADDR must match the IP Address parameter in the attachment configuration. |
| **PORTNO** | Defaults to 5001. Can be set to something else here, and then should be made to match the printer ″TCP Port″ parameter. |

## Modifying the TCP/IP Profile in MVS

The TCP/IP profile contains system configuration statements used to initialize the TCP/IP address space. This section contains information about those configuration statements that have special considerations when you are printing from PSF on TCP/IP-attached printers. If you change any of the values in the TCP/IP profile, restart TCP/IP to pick up the changes.

For information about the TCP/IP profile and the statements described in this section, refer to:

- *IBM TCP/IP MVS Customization and Administration Guide*.
- *IBM TCP/IP Performance and Tuning Guide*

The following statements in the MVS TCP/IP profile, have special considerations when using PSF to print on a TCP/IP-attached printer:

- DATABUFFERPOOLSIZE, which specifies the amount and size of data buffers
- SMALLDATABUFFERPOOLSIZE, which specifies the amount of small data buffers
- TINYDATABUFFERPOOLSIZE, which specifies the amount of tiny data buffers
- KEEPALIVEOPTIONS, which specifies the interval between keep-alive transmissions
- GATEWAY, which defines static routes, including the maximum packet size for each route

Samples of these statements are printed in bold in Figure 78.

```
ACBPOOLSIZE                  1000
ADDRESSTRANSLATIONPOOLSIZE   1500
CCBPOOLSIZE                  150
DATABUFFERPOOLSIZE           160  32768
ENVELOPEPOOLSIZE             750
IPROUTEPOOLSIZE              300
LARGEENVELOPEPOOLSIZE        50
RCBPOOLSIZE                  50
SCBPOOLSIZE                  256
SKCBPOOLSIZE                 256
SMALLDATABUFFERPOOLSIZE      256
TCBPOOLSIZE                  512
TINYDATABUFFERPOOLSIZE       256
UCBPOOLSIZE                  100

KEEPALIVEOPTIONS INTERVAL 10 SENDGARBAGE FALSE ENDKEEPALIVEOPTIONS

GATEWAY
; * Network  First hop   Linkname Packet size Subnet mask Subnet value
  9          =           BPCLAN    2000        0.255.255.0  0.99.12.0
  DEFAULTNET 9.99.12.254 BPCLAN    2000        0.255.255.0  0
```

*Figure 78. Sample Parameters in the TCP/IP Profile*

**Note:** This example is *not* a complete TCP/IP profile. For more information on installing TCP/IP, refer to *TCP/IP for MVS: Customization and Administration Guide*.

***DATABUFFERPOOLSIZE Statement:*** The DATABUFFERPOOLSIZE statement defines the amount and size of the data buffers. For printing on TCP/IP-attached printers, IBM recommends that you specify at least

- 160 data buffers
- 32768 buffer size

***SMALLDATABUFFERPOOLSIZE Statement:*** The SMALLDATABUFFERPOOLSIZE statement defines the amount of small data buffers. For printing on TCP/IP-attached printers, IBM recommends that you specify at least 256 small data buffers.

***TINYDATABUFFERPOOLSIZE Statement:*** The TINYDATABUFFERPOOLSIZE statement defines the amount of tiny data buffers. For printing on TCP/IP-attached printers, IBM recommends that you specify at least 256 tiny data buffers.

***KEEPALIVEOPTIONS Statement:*** PSF relies on TCP to detect when a connection with a TCP/IP-attached printer is no longer usable. TCP sends keep-alive probes to the connection partner periodically when no data has been exchanged between PSF and its connection partner. These periodic probes, called keep-alive transmissions, enable TCP to discover when a connection is no longer usable even if the connection partner is abruptly powered off or is no longer accessible through the network.

The frequency of keep-alive transmissions is controlled by the INTERVAL parameter on the KEEPALIVEOPTIONS statement. The frequency applies to all TCP applications that direct TCP to send keep-alive transmissions. The default frequency is after approximately 2 hours of inactivity.

For printing on TCP/IP-attached printers, IBM recommends that you specify a shorter interval than the default, such as 10 minutes for the interval between keep-alive transmissions.

Also, specify SENDGARBAGE TRUE if any target host requires that the keep-alive packet contain data. For example:

```
KEEPALIVEOPTIONS INTERVAL 5 SENDGARBAGE TRUE ENDKEEPALIVEOPTIONS
```

***GATEWAY Statement:*** The *Packet_size* parameter of the GATEWAY statement defines the maximum transmission unit (MTU) for the MVS host. Note that the MTU size must not exceed the maximum size that can be sent through the control unit; otherwise, transmission problems will occur.

For printing on TCP/IP token-ring attached printers, IBM recommends an MTU size of 2000 bytes.

**Note:** For values in the GATEWAY statement other than the packet size, specify the correct values for your installation.

## Pinging the Printer

To verify that the MVS system can establish a connection with the TCP/IP-attached printer, ping the printer from the MVS system.

Issue the following command from a TSO session:

```
TSO PING ip-address
```

In JES2, enter the following command from the System Display and Search Facility (SDSF) menu 6:

```
ping ip-address
```

*ip-address*
Specifies the Internet Protocol (IP) address of the printer.

Figure 79 shows an example of a successful and unsuccessful ping.

Successful ping:

```
EZA0458I Ping V3R1: Pinging host 9.99.12.33
(Use ATTN to interrupt.)
EZA0463I PING: Ping #1 response took 0.084 seconds.
Successes so far = 1.
```

Unsuccessful ping:

```
EZA0458I Ping V3R1: Pinging host 9.99.12.33
(Use ATTN to interrupt.)
EZA0464I PING: Ping #1 timed out
```

*Figure 79. Examples of Responses to a Ping Command*

***Ping is Not Successful:*** If the ping is not successful, verify the following:

- The printer is powered on.
- The MVS address is unique in the TCP/IP network.

  If the IP address of the MVS system is not unique, see your network administrator to resolve the IP-address problem.
- The Maximum Transmission Unit (MTU) size of the IP packet for the MVS system is equal to the MTU size of the printer. See “GATEWAY Statement” on page 226 for information about the recommended values for the MVS system.
  - To change the MTU size for the MVS system, change the GATEWAY statement in the MVS TCP/IP profile and restart TCP/IP to pick up the changes.
  - To change the MTU size for the printer, refer to your printer documentation.

If none of these problems exists, contact your TCP/IP network administrator about a possible network problem.

***Ping is Successful:*** A successful ping usually indicates that the MVS system can communicate with the printer; however, you might receive a successful ping even though IP address of the TCP/IP-attached printer is a duplicate of another IP address.

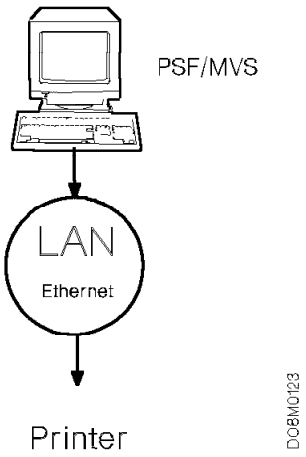
If PSF is unable to establish a network connection with the TCP/IP-attached printer, or if PSF output for this printer prints elsewhere, follow these steps to verify that the IP address of the printer is unique:

1. Turn off the printer.
2. Wait at least 5 minutes for TCP/IP to clear the Address Resolution Protocol (ARP) tables.[1]
3. Enter the **ping** command again from the MVS system to determine whether you receive a response.

If you receive a successful response to the ping command, indicating that a duplicate IP address exists, contact your TCP/IP network administrator to resolve the IP-address problem.

[1] You may need to wait longer if your installation specified a longer interval on the ARPAGE configuration statement in the TCP/IP profile. Refer to *IBM TCP/IP MVS Customization and Administration Guide* for information about the ARPAGE statement.

# Chapter 18. PSF/MVS Ethernet TCP/IP Attachment




*PSF/MVS Ethernet TCP/IP Attachment*

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and Ethernet TCP/IP attachment:

**Tasks described in this chapter:**

- Ask your LAN administrator for the following:
  - IP address
  - Subnet mask
  - Default gateway address
- Complete the worksheet for your printer.

**Tasks described in the previous chapter:**

- Update the MVS printer definitions. See "MVS Printer Definitions" on page 222.
- Update the MVS startup procedure for your host system. See "PSF/MVS Startup Procedure" on page 222.
- Modify the TCP/IP Profile in MVS. See "Modifying the TCP/IP Profile in MVS" on page 225.

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host. See "Requirements for Using a TCP/IP-Attached IPDS Printer" on page 216.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

For more information about requirements, refer to:

- "Requirements for Using a TCP/IP-Attached IPDS Printer" on page 216
- Chapter 1, "Read This Chapter First" on page 1
- *Advanced Function Presentation: Printer Information*, G544-3290
- The Introduction and Planning Guide for your printer

## PSF/MVS Ethernet TCP/IP Attachment Worksheet

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets list the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If the **Attachment Parameter** and the **PSF/MVS Value** columns list a parameter on the same line, the values you specify for those parameters must be the same.
- The **Available Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended. More requirements regarding parameter values are described in the next section.

*Table 39. PSF/MVS Ethernet TCP/IP Attachment Configuration Worksheet*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | MVS TCP/IP Profile | Available Values | Value to Use |
|---|---|---|---|---|---|
| Install Status | | | | Yes or No | **Yes** |
| TCP Port | | | | 5001 to 65536 | |
| IP Address | | IPADDR | | X.X.X.X where X <= 255 | |
| Subnet Mask | | | | X.X.X.X where X <= 255 | |
| Default Gateway Address | | | | X.X.X.X where X <= 255 | |
| Standard MTU Size | | | GATEWAY (Packet_size) | 60 to 1500 (bytes) | |
| IEEE802.3 MTU Size | | | GATEWAY (Packet_size) | 60 to 1492 (bytes) | |
| Ethernet Type | | | | Standard or IEEE802.3 | |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | |
| | PROC(JES2), JNAME(JES3), PNAME(JES3) | PROC name | | | |

*Table 40 (Page 1 of 2). PSF/MVS Ethernet TCP/IP Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | PSF/MVS Value | Available Values | Value to Use |
|---|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> TCP/IP System | | | | | |
| Printer Name | | | | | 1-16 characters |
| Name Server IP Address | | | | | X.X.X.X where X <=255 |
| Domain Name | | | | | 1-32 characters |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration -> Address | | | | | |
| Alternate Address | | | | | 4000 0000 0000 to 7FFF FFFF FFFF |
| MAC Address | | | | | Display Only |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration | | | | | |
| Auto Start | | | | | Yes or No |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration -> TCP/IP | | | | | |
| IP Address | | IPADDR | | | X.X.X.X where X <=255 |
| Subnet Mask | | | | Subnet Mask | X.X.X.X where X <=255 |
| Default Gateway Address | | | | Gateway Address | X.X.X.X where X <=255 |
| Ethernet Type | | | | | Standard or IEEE802.3 |
| MTU Size | | | GATEWAY (Packet_size) | | 60 to 1500 |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | |
| Source Attachment | | | | | **TCP/IP Ethernet** |
| IPDS TCP Port Number | | | | Port | 5001 to 65536 |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | |
| Enable IPDS | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended, or which must match other host configuration parameters. | | | | | |

*Table 40 (Page 2 of 2). PSF/MVS Ethernet TCP/IP Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameters | MVS Printer Descriptions | PSF Startup Procedure | PSF/MVS Value | Available Values | Value to Use |
|---|---|---|---|---|---|
| | PROC(JES2),<br>JNAME(JES3),<br>PNAME(JES3) | PROC name | | | |

**Notes:**

1. Printer Name, Name Server IP Address, and Domain Name apply only when you use FTP, TFTP, or LPR to send ASCII jobs to the printer.

## PSF/MVS Ethernet TCP/IP Configuration

Figure 80 shows a sample configuration for an PSF/MVS Ethernet TCP/IP configuration. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 235 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
TCP Port:                   5001
IP address:                 9.99.5.240
Subnet mask:                255.255.255.128
Default gateway address:    9.99.5.132
Standard MTU size:          1500
IEEE8023 MTU size:          1492
Ethernet type:              Standard
```

*Figure 80. PSF/MVS Ethernet TCP/IP Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **TCP port** | The TCP socket address of the attachment. Specify **5001**, the default value, for TCP/IP attached printers. |
| **IP address** | The Internet Protocol address of the printer in dotted decimal format.<br>You are assigned this value by your LAN administrator. It must be unique, and it must match the IPADDR value in the PSF/MVS Startup Procedure (see topic 222). |
| **Subnet mask** | The mask identifying the local subnet in dotted decimal format.<br>You must get this value from your LAN administrator. If there is no local subnet, leave this field blank. |
| **Default gateway address** | The IP address of the default gateway in dotted decimal format.<br>You must get this value from your LAN administrator. If there is no local gateway, leave this field blank. |
| **Standard MTU size** | MTU is an abbreviation for maximum transmission unit. The MTU size for Standard Ethernet type ranges from 60 to 1500. The recommended size is 1500. The MTU size must match the MTU size specified by the host system that is sending jobs to the printer. It must also match the Gateway Packet_size value in the MVS TCP/IP profile (see topic 225). |
| **IEEE802.3 MTU size** | The MTU size for IEEE802.3 Ethernet type ranges from 60 to 1492. The recommended size is 1492. The MTU size must match the MTU size specified by the host system that is sending jobs to the printer. It must also match the Gateway Packet_size value in the MVS TCP/IP profile (see topic 225).<br>You may get both MTU sizes from your LAN administrator. |
| **Ethernet type** | The Ethernet type, either IEEE802.3 or standard. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Default gateway address** | The IP address of the default gateway in dotted decimal format.<br><br>You must get this value from your LAN administrator. If there is no local gateway, leave this field blank. |
| **Printer name** | The name that identifies the printer in messages or mail generated for ASCII jobs, or when a user establishes an FTP session with the printer. The name can be up to 16 alphanumeric characters. The Printer Name cannot be blank; if you do not need a name or if the printer is for IPDS jobs only, use the default value.<br><br>This is also known as the **HOST NAME** or **SERVER NAME** in most TCP/IP environments.<br><br>The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Name server IP address** | The IP address of the name server in dotted decimal format. The name server allows the printer to recognize systems by name, rather than just by IP address. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Domain name** | The name of the domain the printer is in, up to 32 alphanumeric characters. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Alternate address** | The LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. You can use the MAC address for the printer's alternate address. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **MTU size** | The MTU size for the type of Ethernet you use. For Standard Ethernet type, MTU size ranges from 60 to 1500. The recommended size is 1500. For IEEE802.3 Ethernet type, MTU size ranges from 60 to 1492. The recommended size is 1492.<br><br>The MTU size must match the MTU size specified by the host system that is sending jobs to the printer. It must also match the Gateway Packet_size value in the MVS TCP/IP profile (see topic 225).<br><br>You may get both MTU sizes from your LAN administrator. |
| **Ethernet type** | The Ethernet type, either IEEE802.3 or standard. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **TCP/IP Ethernet**. |
| **IPDS TCP Port number** | The TCP socket address of the attachment. Specify **5001**, the default value, for TCP/IP attached printers.<br><br>**Note:** This parameter replaces the TCP Port parameter. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Enable IPDS** | Specify **ENABLED.**<br><br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |

## MVS Printer Definitions

### JES2 Printer Definitions

Figure 81 shows the JES2 printer definition initialization member, located in the system parmlib.

```
FSSDEF FSSNAME=FSS3130,PROC=WRT3130,HASPFSSM=HASPFSSM
PRT3130  FSS=FSS1,MODE=FSS,PRMODE=(LINE,PAGE,SOSI1),
         CLASS=C,UCS=0,SEP,NOSEPDS,CKPTPAGE=100,
         DRAIN,MARK,TRKCELL=YES
```

*Figure 81. PSF/MVS JES2 Printer Definition*

**Note:** The above example is correct for JES2 1.3.6 and 2.1.0. For JES2 3.1.1 and above, the FSSNAME parameter is gone, and the FSSNAME is in parentheses after FSSDEF, as in FSSDEF(FSS1).

| Field | Notes |
|---|---|
| **PROC** | The value you specify on the PROC parameter must match the name on the PSF/MVS Startup Procedure. |

### JES3 Printer Definitions

Figure 76 on page 222 shows an example of a JES3 printer definition. This example is NOT executable, but it is intended to help the JES3 system programmer define the printer to the MVS host.

```
FSSDEF,TYPE=WTR,FSSNAME=FSS3130,PNAME=WRT3130,SYSTEM=SYS1,TERM=NO
DEVICE,JNAME=PRT3130,JUNIT=(,SYS1,,OFF),FSSNAME=FSS3130,
       MODE=FSS,PM=(LINE,PAGE,SOSI1),CHARS=(YES,GT12),
```

*Figure 82. PSF/MVS JES3 Printer Definition*

| Field | Notes |
|---|---|
| **JNAME** | The value you specify on the JNAME parameter must match the name of the printer FSA on the PSF/MVS Startup Procedure. |
| **PNAME** | The value you specify on the PNAME parameter must match the name on the PSF/MVS Startup Procedure. |

## PSF/MVS Startup Procedure

Figure 83 on page 238 shows a sample startup procedure for PSF/MVS. Highlighted values are required or recommended, or they must match another configuration value. For more detailed information, see the *PSF/MVS System Programmer's Guide*.

```
//WRT3130 PROC
//STEP01   EXEC PGM=APSPPIEP,REGION=4096K
//JOBHDR OUTPUT PAGEDEF=V06483,     /* JOB SEPARATOR PAGEDEF         */
//       FORMDEF=A10110,CHARS=GT15  /* JOB SEPARATOR FORMDEF         */
//JOBTLR OUTPUT PAGEDEF=V06483,     /* JOB SEPARATOR PAGEDEF         */
//       FORMDEF=A10110,CHARS=GT15  /* JOB SEPARATOR FORMDEF         */
//DSHDR  OUTPUT PAGEDEF=V06483,     /* DS  SEPARATOR PAGEDEF         */
//       FORMDEF=A10110,CHARS=GT15  /* DS  SEPARATOR FORMDEF         */
//MSGDS  OUTPUT PAGEDEF=A06462,     /* MESSAGE DATASET PAGEDEF       */
//       FORMDEF=A10110             /* MESSAGE DATASET FORMDEF       */
//FONT01   DD   DSN=SYS1.FONTLIBB,  /* SYSTEM FONTS - 240 PEL        */
//         DISP=SHR
//         DD   DSN=SYS1.FONTOLN,   /* IBM Outline Fonts             */
//         DISP=SHR
//FONT02   DD   DSN=SYS1.FONT300,   /* SYSTEM FONTS - 300 PEL        */
//         DISP=SHR
//         DD   DSN=SYS1.FONTOLN,   /* IBM Outline Fonts             */
//         DISP=SHR
//PSEG01   DD   DSN=SYS1.PSEGLIB,   /* SYSTEM PAGE SEGMENTS          */
//         DISP=SHR
//OLAY01   DD   DSN=SYS1.OVERLIB,   /* SYSTEM MEDIUM OVERLAYS        */
//         DISP=SHR                 /*                               */
//PDEF01   DD   DSN=SYS1.PDEFLIB,   /* SYSTEM PAGEDEFS               */
//         DISP=SHR
//FDEF01   DD   DSN=SYS1.FDEFLIB,   /* SYSTEM FORMDEFS               */
//         DISP=SHR
//* ************************************************************     */
//*              PRINTDEV                                           */
//* ************************************************************     */
//PRT3130  CNTL
//PRT3130  PRINTDEV FONTDD=*.FONT01, /* 240 PEL FONT LIBRARY DD      */
//*                                  /* <-- SEE REQUIRED ACTIONS     */
//*                                  /*     ABOVE                    */
//*PRT3130  PRINTDEV FONTDD=*.FONT02, /* 300 PEL FONT LIBRARY DD     */
//*                                   /* <-- SEE REQUIRED ACTIONS    */
//*                                   /*     ABOVE                   */
//          OVLYDD=*.OLAY01,         /* OVERLAY  LIBRARY DD          */
//          PSEGDD=*.PSEG01,         /* SEGMENT  LIBRARY DD          */
//          PDEFDD=*.PDEF01,         /* PAGEDEF  LIBRARY DD          */
//          FDEFDD=*.FDEF01,         /* FORMDEF  LIBRARY DD          */
//          JOBHDR=*.JOBHDR,         /* JOB HEADER SEPARATOR OUTPUT  */
//          JOBTRLR=*.JOBTLR,        /* JOB TRAILER SEPARATOR OUTPUT */
//          DSHDR=*.DSHDR,           /* DATA SET HEADER SEPARATOR    */
//          MESSAGE=*.MSGDS,         /* MESSAGE DATA SET OUTPUT      */
//          BUFNO=5,                 /* NUMBER OF WRITE DATA BUFFERS */
//          PAGEDEF=A06462,          /* DEVICE PAGEDEF DEFAULT       */
//          FORMDEF=A10110,          /* DEVICE FORMDEF DEFAULT       */
//          CHARS=(GF10,             /* DEVICE                       */
//          GS10,TU10,GU10),         /* DEFAULT FONT SET             */
//          PIMSG=YES,               /* ACCUMULATE DATA SET MESSAGES */
//          DATACK=BLOCK,            /* REPORT ALL DATA-CHECK ERRORS */
//          TRACE=NO,                /* CREATE INTERNAL TRACE        */
//          FAILURE=WCONNECT,        /* PSF ACTION ON PRINTER        */
//*                                  /*   FAILURE                    */
//          TIMEOUT=REDRIVE,         /* PSF ACTION ON TIMEOUT        */
//          MGMTMODE=IMMED,          /* PRINTER MANAGEMENT MODE      */
//*         MGMTMODE=OUTAVAIL,       /* 3130 R2 VALUE !!! (recommen- */
                                                ded for FSF sharing) */
//          DISCINTV=0,              /* DISCONNECT INTERVAL IN       */
//*         DISCINTV=5,              /* 3130 R2 VALUE !!! (Recommen- */
                                              for PSF Sharing)      */
//*                                  /*   SECONDS                    */
//          IPADDR='xxx.xxx.xxx.xxx' /* IP ADDRESS FOR TCP/IP        */
//          PORTNO='5001'            /* CIP PORT NUMBER              */
//PRT1      ENDCNTL
```

*Figure 83. PSF/MVS Sample Start Up Procedure (TCP/IP)*

| Field | Notes |
|---|---|
| **PROC name** | The procedure name (WRT3935 in the example) must match one of the following:<br>• The name on the PROC parameter of the FSSDEF statement in the JES2 printer definition.<br>• The name on the PNAME parameter of the FSSDEF statement in the JES3 printer definition. |
| **Printer FSA name** | The label you specify on the CNTL, PRINTDEV, and ENDCTL statements (PRT3130 in the example) must match the name on the JNAME parameter of the DEVICE statement in the JES3 printer definition. |
| **MGMTMODE** | Set the MGMTMODE value to **IMMED** or **OUTAVAIL**.<br>**Note:** For the 3130 Release 2, specify **OUTAVAIL**. |
| **DISCINTV** | For the 3130 Release 2, specify **5** or **10** seconds. For other printers, specify **0**. |
| **IPADDR** | IPADDR must match the IP Address parameter in the attachment configuration. |
| **PORTNO** | Defaults to 5001. Can be set to something else here, and then should be made to match the printer ″TCP Port″ parameter. |

## Modifying the TCP/IP Profile in MVS

The TCP/IP profile contains system configuration statements used to initialize the TCP/IP address space. This section contains information about those configuration statements that have special considerations when you are printing from PSF on TCP/IP-attached printers. If you change any of the values in the TCP/IP profile, restart TCP/IP to pick up the changes.

For information about the TCP/IP profile and the statements described in this section, refer to:

- *IBM TCP/IP MVS Customization and Administration Guide*.
- *IBM TCP/IP Performance and Tuning Guide*

The following statements in the MVS TCP/IP profile, have special considerations when using PSF to print on a TCP/IP-attached printer:

- DATABUFFERPOOLSIZE, which specifies the amount and size of data buffers
- SMALLDATABUFFERPOOLSIZE, which specifies the amount of small data buffers
- TINYDATABUFFERPOOLSIZE, which specifies the amount of tiny data buffers
- KEEPALIVEOPTIONS, which specifies the interval between keep-alive transmissions
- GATEWAY, which defines static routes, including the maximum packet size for each route

Samples of these statements are printed in bold in Figure 84.

```
ACBPOOLSIZE                 1000
ADDRESSTRANSLATIONPOOLSIZE  1500
CCBPOOLSIZE                 150
DATABUFFERPOOLSIZE          160  32768
ENVELOPEPOOLSIZE            750
IPROUTEPOOLSIZE             300
LARGEENVELOPEPOOLSIZE       50
RCBPOOLSIZE                 50
SCBPOOLSIZE                 256
SKCBPOOLSIZE                256
SMALLDATABUFFERPOOLSIZE     256
TCBPOOLSIZE                 512
TINYDATABUFFERPOOLSIZE      256
UCBPOOLSIZE                 100

KEEPALIVEOPTIONS INTERVAL 10 SENDGARBAGE FALSE ENDKEEPALIVEOPTIONS

GATEWAY
; * Network  First hop   Linkname Packet size Subnet mask Subnet value
  9          =           BPCLAN    2000        0.255.255.0  0.99.12.0
  DEFAULTNET 9.99.12.254 BPCLAN    2000        0.255.255.0  0
```

*Figure 84. Sample Parameters in the TCP/IP Profile*

**Note:** This example is *not* a complete TCP/IP profile. For more information on installing TCP/IP, refer to *TCP/IP for MVS: Customization and Administration Guide*.

***DATABUFFERPOOLSIZE Statement:*** The DATABUFFERPOOLSIZE statement defines the amount and size of the data buffers. For printing on TCP/IP-attached printers, IBM recommends that you specify at least

- 160 data buffers
- 32768 buffer size

***SMALLDATABUFFERPOOLSIZE Statement:*** The SMALLDATABUFFERPOOLSIZE statement defines the amount of small data buffers. For printing on TCP/IP-attached printers, IBM recommends that you specify at least 256 small data buffers.

***TINYDATABUFFERPOOLSIZE Statement:*** The TINYDATABUFFERPOOLSIZE statement defines the amount of tiny data buffers. For printing on TCP/IP-attached printers, IBM recommends that you specify at least 256 tiny data buffers.

***KEEPALIVEOPTIONS Statement:*** PSF relies on TCP to detect when a connection with a TCP/IP-attached printer is no longer usable. TCP sends keep-alive probes to the connection partner periodically when no data has been exchanged between PSF and its connection partner. These periodic probes, called keep-alive transmissions, enable TCP to discover when a connection is no longer usable even if the connection partner is abruptly powered off or is no longer accessible through the network.

The frequency of keep-alive transmissions is controlled by the INTERVAL parameter on the KEEPALIVEOPTIONS statement. The frequency applies to all TCP applications that direct TCP to send keep-alive transmissions. The default frequency is after approximately 2 hours of inactivity.

For printing on TCP/IP-attached printers, IBM recommends that you specify a shorter interval than the default, such as 10 minutes for the interval between keep-alive transmissions.

Also, specify SENDGARBAGE TRUE if any target host requires that the keep-alive packet contain data. For example:

```
KEEPALIVEOPTIONS INTERVAL 5 SENDGARBAGE TRUE ENDKEEPALIVEOPTIONS
```

***GATEWAY Statement:*** The *Packet_size* parameter of the GATEWAY statement defines the maximum transmission unit (MTU) for the MVS host. Note that the MTU size must not exceed the maximum size that can be sent through the control unit; otherwise, transmission problems will occur.

For printing on TCP/IP token-ring attached printers, IBM recommends an MTU size of 2000 bytes.

**Note:** For values in the GATEWAY statement other than the packet size, specify the correct values for your installation.

## Pinging the Printer

To verify that the MVS system can establish a connection with the TCP/IP-attached printer, ping the printer from the MVS system.

Issue the following command from a TSO session:

```
TSO PING ip-address
```

In JES2, enter the following command from the System Display and Search Facility (SDSF) menu 6:

```
ping ip-address
```

*ip-address*
Specifies the Internet Protocol (IP) address of the printer.

Figure 85 shows an example of a successful and unsuccessful ping.

Successful ping:

```
EZA0458I Ping V3R1: Pinging host 9.99.12.33
(Use ATTN to interrupt.)
EZA0463I PING: Ping #1 response took 0.084 seconds.
Successes so far = 1.
```

Unsuccessful ping:

```
EZA0458I Ping V3R1: Pinging host 9.99.12.33
(Use ATTN to interrupt.)
EZA0464I PING: Ping #1 timed out
```

*Figure 85. Examples of Responses to a Ping Command*

***Ping is Not Successful:*** If the ping is not successful, verify the following:

- The printer is powered on.
- The MVS address is unique in the TCP/IP network.

  If the IP address of the MVS system is not unique, see your network administrator to resolve the IP-address problem.
- The Maximum Transmission Unit (MTU) size of the IP packet for the MVS system is equal to the MTU size of the printer. See “GATEWAY Statement” on page 241 for information about the recommended values for the MVS system.
  - To change the MTU size for the MVS system, change the GATEWAY statement in the MVS TCP/IP profile and restart TCP/IP to pick up the changes.
  - To change the MTU size for the printer, refer to your printer documentation.

If none of these problems exists, contact your TCP/IP network administrator about a possible network problem.

***Ping is Successful:*** A successful ping usually indicates that the MVS system can communicate with the printer; however, you might receive a successful ping even though IP address of the TCP/IP-attached printer is a duplicate of another IP address.

If PSF is unable to establish a network connection with the TCP/IP-attached printer, or if PSF output for this printer prints elsewhere, follow these steps to verify that the IP address of the printer is unique:

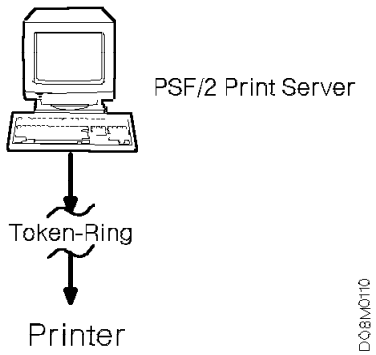
1. Turn off the printer.
2. Wait at least 5 minutes for TCP/IP to clear the Address Resolution Protocol (ARP) tables.[2]
3. Enter the **ping** command again from the MVS system to determine whether you receive a response.

If you receive a successful response to the ping command, indicating that a duplicate IP address exists, contact your TCP/IP network administrator to resolve the IP-address problem.  bottup c8oa4set

[2] You may need to wait longer if your installation specified a longer interval on the ARPAGE configuration statement in the TCP/IP profile. Refer to *IBM TCP/IP MVS Customization and Administration Guide* for information about the ARPAGE statement.

# PSF/2 Attachments

# Chapter 19. PSF/2 Token-Ring SNA Attachment




*PSF/2 Token-Ring SNA Attachment*

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and token-ring SNA attachment:

- Complete the attachment worksheet for your printer.
- Complete the Communications Manager Worksheet. (Completing this worksheet makes it easier for you to follow the procedures for configuring Communications Manager/2 and creating the PSF/2 printing device.) See “Communications Manager Worksheet” on page 255.
- Configure Communications Manager/2. See “Configuring Communications Manager/2” on page 257.
- Create the PSF/2 printing device. See “Creating a Token-Ring-Attached PSF/2 Printing Device” on page 260.

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

For more information about requirements, refer to:

- Chapter 1, “Read This Chapter First” on page 1
- *Advanced Function Presentation: Printer Information*, G544-3290
- The Introduction and Planning Guide for your printer

## PSF/2 Token-Ring SNA Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and earlier versions of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets provide two basic functions:

→ The top part of the worksheet lists the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If the **CM/2 Parameter** or **PSF/2 Parameter** columns list a parameter on the same line as an attachment parameter, the values you specify for those parameters must be the same as the values you specify for the attachment parameter.
- The **CM/2 Menu Tree** column shows the menu path you need to follow to update the CM/2 parameter.
- The **Acceptable Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

→ The lower part of the worksheet lists configuration parameters that do not correspond to attachment parameters, but that do require consideration. Use this part of the worksheet to help make sure that the host environment is set up properly for the attachment.

- If a line contains more than one parameter, the values you specify for those parameters must be the same.
- If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 41. PSF/2 Token-Ring SNA Attachment Configuration Worksheet*

| Printer Attachment Parameter | CM/2 Menu Tree [2] | CM/2 Parameter | PSF/2 Parameter | Acceptable Values | Value to Use |
|---|---|---|---|---|---|
| Installed | | | | Yes or No | ***Yes*** |
| XID Number | | | | 0710 0000 to 071F FFFF | **07100000** |
| Remote Network Name | 'SNA Local Node Characteristics' | Network ID | | Up to 8 characters | |
| SNA Intervention Timer | | | | 0 to 99 (Minutes) | **99** |
| Local LU Name | 'SNA Connections' > 'Partner Type' > 'Peer Node' > 'Create' > 'Adapter Type' > 'Token Ring or other LAN Types' > 'Adapter number' > 'Continue' > 'Define Partner LUs' | LU name | | Up to 8 characters | |
| Remote LU Name | 'SNA Local Node Characteristics' | Local Node Name | LU Alias | Up to 8 characters | |
| Mode Name | 'SNA Features' > 'Modes' > 'Create' | Mode Name | | Up to 8 characters | **QSPWTR** |
| Remote Address | / IBMCOM / LAPS | Network adapter address | | 4000 0000 0000 to 7FFF FFFF FFFF | |
| Local Network Name | 'SNA Connections' > 'Partner Type' > 'Peer Node' > 'Create' > 'Adapter Type' > 'Token Ring or other LAN Types' > 'Adapter number' > 'Continue' > 'Define Partner LU' | Network ID | | Up to 8 characters | |
| Control Point Name | 'SNA Connections' > 'Partner Type' > 'Peer Node' > 'Create' > 'Adapter Type' > 'Token Ring or other LAN Types' > 'Adapter number' > 'Continue' | Partner Node Name | | Up to 8 characters | |
| Alternate Address | 'SNA Connections' > 'Partner Type' > 'Peer Node' > 'Create' > 'Adapter Type' > 'Token Ring or other LAN Types' > 'Adapter number' > 'Continue' | LAN Destination Address | | 4000 0000 0000 to 7FFF FFFF FFFF | |
| Ring Speed (Mbps) | | | | 4 or 16 | |
| SSCP ID (0500 0000 xxxx) | | | | 0000 | **0000** |
| Local LU Address | | | | 1 | **0** |
| Call Type | | | | Call or Listen | |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended. | | | | | |
| | 'DLC-Token-Ring or other LAN Types' | Maximum I - field size | | | **3849** |
| | 'SNA Features' > 'Modes' > 'Create' | Maximum RUsize | | | **3840** |

**Notes:**

1. Names can be one to eight characters. 0–9, A–Z, $, #, and @ are permitted, but the first character cannot be 0–9.
2. In Communication Manager, for the workstation connection type, select **Token-ring or other LAN types**. Then select **APPC APIs** from the Feature or Application list. Finally, select **Configure** which will display the Communications Manager Profile List Sheet window.

*Table 42 (Page 1 of 2). PSF/2 Token-Ring SNA Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameter | CM/2 Menu Tree [2] | CM/2 Parameter | PSF/2 Parameter | Acceptable Values | Value to Use |
|---|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Protocols | | | | | |
| Enable SNA | | | | Enable or Disable | **Enable** |
| Enable TCP/IP | | | | Enable or Disable | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> Address | | | | | |
| Alternate Address | 'SNA Connections' > 'Partner Type' > 'Peer Node' > 'Create' > 'Adapter Type' > 'Token Ring or other LAN Types' > 'Adapter number' > 'Continue' | LAN Destination Address | | 4000 0000 0000 to 7FFF FFFF FFFF | |
| MAC Address | | | | | Display Only |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration | | | | | |
| Auto Start | | | | Yes or No | |
| Ring Speed (Mbps) | | | | 4 or 16 | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> SNA | | | | | |
| XID Number | | | | 0710 0000 to 071F FFFF | **07100000** |
| Remote Network Name | 'SNA Local Node Characteristics' | Network ID | | Up to 8 characters | |
| SNA Intervention Timer | | | | 0 to 99 (Minutes) | **99** |
| Local LU Name | 'SNA Connections' > 'Partner Type' > 'Peer Node' > 'Create' > 'Adapter Type' > 'Token Ring or other LAN Types' > 'Adapter number' > 'Continue' > 'Define Partner LUs' | LU name | | Up to 8 characters | |
| Remote LU Name | | | | Up to 8 characters | LU3130 |
| Mode Name | 'SNA Features' > 'Modes' > 'Create' | Mode Name | | Up to 8 characters | **QSPWTR** |
| Remote Address | / IBMCOM / LAPS | Network adapter address | | 4000 0000 0000 to 7FFF FFFF FFFF | |
| Local Network Name | 'SNA Connections' > 'Partner Type' > 'Peer Node' > 'Create' > 'Adapter Type' > 'Token Ring or other LAN Types' > 'Adapter number' > 'Continue' > 'Define Partner LU' | Network ID | | Up to 8 characters | |
| Control Point Name | 'SNA Connections' > 'Partner Type' > 'Peer Node' > 'Create' > 'Adapter Type' > 'Token Ring or other LAN Types' > 'Adapter number' > 'Continue' | Partner Node Name | | Up to 8 characters | |
| SSCP ID (0500 0000 xxxx) | | | | 0000 | **0000** |
| Local LU Address | | | | 0 | **0** |
| Call Type | | | | Call or Listen | |

*Table 42 (Page 2 of 2). PSF/2 Token-Ring SNA Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameter | CM/2 Menu Tree [2] | CM/2 Parameter | PSF/2 Parameter | Acceptable Values | Value to Use |
|---|---|---|---|---|---|
| Solicit SSCP | | | | Yes or No | **YES** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | |
| Source Attachment | | | | | **SNA TOKEN RING** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | |
| Enable IPDS | | | | Enable or Disable | **Enable** |
| **Note:** The rest of this table lists host configuration parameters that are required or recommended. | | | | | |
| | 'DLC-Token-Ring or other LAN Types' | Maximum I - field size | | | **3849** |
| | 'SNA Features' > 'Modes' > 'Create' | Maximum RU size | | | **3840** |

**Notes:**

1. Names can be one to eight characters. 0–9, A – Z, $, #, and @ are permitted, but the first character cannot be 0–9.
2. In Communication Manager, for the workstation connection type, select **Token-ring or other LAN types**. Then select **APPC APIs** from the Feature or Application list. Finally, select **Configure** which will display the Communications Manager Profile List Sheet window.

## PSF/2 Token-Ring SNA Configuration

Figure 86 shows a sample configuration for a Token-Ring SNA attachment. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 253 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
XID number:                 71000000
Remote network name:        USIBMBQ
SNA Intervention Timer:     99
Local LU name:              LU3935
Remote LU name:             BLDS6549
Mode name:                  QSPWTR
Remote address:             400051020104
Local network name:         USIBMBQ
Control point name:         PU3935
Alternate address:          400050050043
Ring speed:                 16
SSCP ID:                    050000000000
Local LU address:           1
Call Type:                  Call
```

*Figure 86. PSF/2 Token-Ring SNA Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Install Status** | Specify **Yes**. |
| **XID Number** | An ID that distinguishes a specific piece of equipment from all other similar pieces of equipment on the network. |
| **Remote Network Name** | The name of the network that the host belongs to. The value you specify for Remote Network Name must match the Network ID you specify in Communications Manager. |
| **SNA Intervention Timer** | This timer defines how many minutes the printer waits before notifying the host that an attachment is not operating. The delay provides time to fix the problem at the printer without having an alert sent to the host. The timer can be set from 0 to 98 minutes. To turn the timer off, specify 99. |
| **Local LU Name** | The name of the local logical unit. The value you specify for Local LU Name must match the LU name you specify in Communications Manager. LU name is the rightmost field of the Full PLU name. |
| **Remote LU Name** | The name of the remote logical unit. The value you specify for Remote LU Name must match:<br>• The Local Node name (PU name) you specify in Communications Manager.<br>• The PSF/2 LU Alias configuration parameter. |
| **Mode Name** | Unless you create your own mode, specify QSPWTR. The value you specify for Mode Name must match the Mode Name parameter in Communications Manager. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Remote Address** | The remote host token-ring adapter card address. The value you specify for Remote Address must match the network adapter address parameter in Communications Manager. |
| **Local Network Name** | The name of the network the printer is attached to. The value you specify for Local Network Name must match the Network ID you specify in Communications Manager. |
| **Control Point Name** | The name the host uses for its application control point. The value you specify for Control Point Name must match the Partner Node Name you specify in Communications Manager. |
| **Alternate Address** | Sets the LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. The value you specify for Alternate Address must match the LAN Destination Address you specify in Communications Manager. |
| **Ring Speed** | The ring speed of the network the adapter is attached to. Specifying the wrong value can cause the network to stop operating. |
| **SSCP ID** | Specifies the ID of the controlling system services control point in the SNA network.<br>Specify **0000**. Note that the printer automatically prefixes this with 0500 0000. |
| **Local LU Address** | The destination address used by other systems to send information to the local logical unit. |
| **Call Type** | Set this value to Listen if you want PSF/2 to contact the printer.<br>Set this value to Call if you want the printer to contact PSF/2. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Enable SNA** | Specifies whether the token ring is enabled or disabled for SNA. Specify **Enabled** (the default value). |
| **Enable TCP/IP** | Specifies whether the token ring is enabled or disabled for TCP/IP. The default is **Enabled**. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. You can use the MAC address for the printer's alternate address. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **SNA Token Ring**. |
| **Enable IPDS** | Specify **ENABLED.**<br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Local LU Name** | **Note:** For the 3130 Release 2, Local LU name entered at the printer must not match the Remote LU Name entered at the printer, and must not match the control point name entered at the printer. |
| **Remote LU Name** | **Note:** For 3130 Release 2, the Remote LU Name must not match any other parameter configured in that printer or in CM2 for that printer. |
| **Solicit SSCP** | This parameter should be set to **YES** except for OS/400 V2R2 and V2R3 environments. |

## Communications Manager Worksheet

The configuration worksheet for token-ring attached printers is shown in the following table. Make a copy of the worksheet so you can fill in information that you will need when you configure Communications Manager/2.

The Communications Manager column shows the parameter names in Communications Manager. For each parameter name, you fill in the value in the Workstation column.

*Table 43. Communications Manager Configuration Worksheet*

| Communications Manager | Workstation | Comments |
|---|---|---|
| 1. Configuration file name | | |
| 2. Adapter number | **1** | |
| 3. Max link stations | **2** | |
| 4. C&SM LAN ID | **LAN ID** | |
| 5. Network ID | **USIBMBQ** | |
| 6. Local node name (PU name) | | The PSF/2 LU alias must match this parameter, which can be entered in upper, lower, or mixed case. |
| 7. Node ID | | |
| 8. LAN Destination Address | **400050050043** | |
| 9. Full PLU name | **USIBMBQ.LU3935** | |
| 10. Partner node name | **PU3935** | |
| 11. Partner LU alias | **PRT3935** | The PSF/2 PLU alias must match this parameter, which can be entered in upper, lower, or mixed case. |
| 12. Mode name | **QSPWTR** | The PSF/2 mode name must match this parameter. |

## Worksheet Parameters

This section contains descriptions of the parameters used in the configuration worksheet for token-ring attached printers.

**1. Configuration file name**

This is the workstation's configuration file name that you will use when you install Communications Manager.

**Note:** If you have already installed Communications Manager, you need to enter the name of your existing configuration file. This file is located in the default C:\CMLIB directory with an extension of .CFG. The configuration parameters will be added to this file.

**2. Adapter number**

This is the workstation token-ring adapter that is being used to communicate with the printer.

- If a single token-ring adapter is installed in your workstation, assign the value of **0** to this parameter.
- If two token-ring adapters are installed in your workstation, assign the value (**0** or **1**) of the adapter number that is being used for the printer attachment.

**3. Max link stations**

This item specifies the maximum number of concurrent links to host systems (via DPF) and to printers that will be supported by this adapter.

- This value must be at least one greater than the number of links attached to this workstation.
- This value must not exceed the value of the **Maximum link stations** parameter for the Extended Services for OS/2 LAN Adapter and Protocol Support, IEEE 802.2 protocol.

**For additional links:** If you increase **Max link stations** for additional links to hosts or printers, you may also have to increase the following parameters:

- Maximum Number of Service Access Points (SAPs)
- Maximum Number of Users configured in the IBM LAN Adapter Protocol Support, IEEE 802.2 protocol

These values are increased for other applications that use OS/2 Communications Manager, and the value specified must be large enough to support all active applications and host systems. See *IBM Extended Services OS/2 LAN Adapter and Protocol Support Configuration Guide*.

**4. C&SM LAN ID**

This item contains the network identifier to be used by Communications & System Manager (C&SM) for Network Management functions.

This ID is stored in Network Management alert messages sent to a Network Management focal point and is used to identify the LAN segment to which this adapter is attached.

This ID is common among all adapters attached to the same LAN segment.

**5. Network ID**

This is the name of the SNA network to which this workstation is attached.

The value you specify for Network ID must match the Remote Network Name parameter in the token-ring attachment configuration.

**6. Local node name (PU name)**

The local node name is used in error logs and in Network Management alert messages to identify this workstation within the SNA network. This name does not have a corresponding network configuration parameter.

This name must match the PSF/2 LU Alias configuration parameter.

*For Rel 1*, the value you specify for Local Node Name must match the Remote LU Name parameter in the token-ring attachment configuration.

*For Rel 2*, the value you specify for Local Node Name must *not* match the Remote LU Name parameter in the token-ring attachment configuration.

**7. Node ID**

This identifier is used by the printer to link with this workstation when attached to a token-ring network. It must be unique within the network.

**8. LAN Destination Address**

This item specifies the destination address for a token-ring adapter. The destination address is the address of the partner's (printer's) LAN adapter.

The value you specify for LAN Destination Address must match the Alternate Address parameter in the token-ring attachment configuration.

**9. Full PLU name**

This item specifies the real network name of the partner LU.

The name has two parts, separated by a period: the name of the network and the name of the partner LU (PLU) as known in the network. The name of the network must match the name you specify on the Local Network Name parameter in the token-ring attachment configuration. The

name of the partner LU must match the value you specify on the Local LU Name parameter in the token-ring attachment configuration.

**10. Partner node name**

This item specifies the control point name (PU name) of the printer.

The value you specify for Partner Node Name must match the Control Point Name parameter in the token-ring attachment configuration.

**11. Partner LU alias**

This item is a descriptive name of the partner (printer) logical unit (LU) that attaches to this configuration's local LU.

This name must match the PSF/2 **PLU Alias** configuration parameter.

**12. Mode name**

This item is a descriptive name for the transmission services mode that defines the printer session capabilities.

This name must match the CM/2 **Mode name** configuration parameter.

The value you specify for Mode Name must match the Mode Name parameter in the token-ring attachment configuration.

## Configuring Communications Manager/2

When attaching printers to the LAN, you need to configure OS/2 Communications Manager/2 as required by PSF/2. This section contains instructions for configuring Communications Manager for token-ring attached printers.

**Note:** The token-ring adapter address must be configured in the LAPS feature of Network Transport Service/2 (NTS/2). For information about how to configure the token-ring adapter address, refer to a *PSF/2 Installation Cookbook*.

The following procedure for configuring Communications Manager for your printer attachment assumes the Communications Manager program is stopped. To stop Communications Manager and access the setup program:

1. Select the Communications Manager/2 icon from the OS/2 desktop.
2. Select **Stop Communications Normally** from the Communications Manager/2 Icon View window.
3. Select **Communications Manager Setup** from the Communications Manager/2 Icon View window.

In configuring Communications Manager, you will perform the following tasks:

- Define the configuration file.
- Configure Data Link Control (DLC) profiles.
- Configure local node characteristics.
- Configure the printer connection.
- Create a mode definition.

**Note:** It is very important that you perform all of the following steps in the order in which they are listed.

### Defining the Configuration File

1. Select **Setup** from the Communications Manager Setup window.
2. Select the name of the worksheet's configuration file from the Configurations list in the Open Configuration window.

3. Select **OK**. You see the OS/2 Communications Manager question “Will this configuration be used for this workstation?”
4. Select **Yes**. You see the Communications Manager Configuration Definition window.
5. Select **Token-ring or other LAN types** from the Workstation Connection Type list.
6. Select **APPC APIs** from the Feature or Application list.
7. Select **Configure**.
   You see the Communications Manager Profile List Sheet window.

## Configuring Data Link Control (DLC) Profiles

8. Select **DLC-Token-ring or other LAN types** from the Communications Manager Profile List Sheet window.
9. Select **Configure**.
   You see the Token Ring or Other LAN Types DLC Adapter Parameters window.
10. Select the adapter specified for the configuration worksheet’s Adapter number.
11. Check the box for **Free unused links**.
12. Set the **Maximum number of link stations** to the Max Link Stations value on the Communications Manager Worksheet (Table 43 on page 255).
13. Set the **Maximum I-field size** to 3849.
14. Set the **C&SM LAN ID** to the C&SM LAN ID value on the Communications Manager Worksheet (Table 43 on page 255).
15. Use the defaults for the remaining items.
16. Select **OK**.
    You see the Communications Manager Profile List Sheet window.

## Configuring Local Node Characteristics

17. Select **SNA local node characteristics** from the Communications Manager Profile List Sheet window.
18. Select **Configure**. You see the Local Node Characteristics window.
19. Set the **Network ID** to the Network ID value on the Communications Manager Worksheet (Table 43 on page 255).
20. Set the **Local node name** to the Local Node Name value on the Communications Manager Worksheet (Table 43 on page 255).
21. Select **End node - no network node server** in the **Node type** list box.
22. Set rightmost field of the **Local node ID (hex)** to the Node ID value on the Communications Manager Worksheet (Table 43 on page 255).

    **Note:** Do not change the value X‘05D’ for the leftmost field of the local node ID.
23. Select **Options**. (This appears only if corrective service to Communications Manager/2 is applied.) You see the Local Node Options window.
24. Set the **Local node alias name** to the Local Node Name value on the Communications Manager Worksheet (Table 43 on page 255).

25. Check the box for **Activate Attach Manager at start up**.
26. Select **OK**. Select **OK** again. You see the Communications Manager Profile List Sheet Window.

## Configuring the Printer Connection

27. Select **SNA connections** from the Communications Manager Profile List Sheet window.
28. Select **Configure**. You see the Connections List window.
29. Select **To peer node** in the **Partner type** list box.
30. Select **Create**. You see the Adapter List window.
31. Select **Token Ring or other LAN types** in the **Adapter Type** list box.
32. Select the adapter number value specified on the Communications Manager Worksheet (Table 43 on page 255).
33. Select **Continue**. You see the Create a Connection to a Peer Node window.
34. Set the **LAN destination address (hex)** to the Dest Address value on the Communications Manager Worksheet (Table 43 on page 255).
35. Set **Partner network ID** to the Full PLU Name, Network Name value on the Communications Manager Worksheet (Table 43 on page 255). This is the leftmost field of the Full PLU name.
36. Set **Partner node name** to the Partner Node Name value on the Communications Manager Worksheet (Table 43 on page 255).
37. Select **Define partner LUs**. You see the Create Partner LUs window.
38. Set the **LU name** to the Full PLU Name, LU Name value on the Communications Manager Worksheet (Table 43 on page 255). This is the rightmost field of the Full PLU name.
39. Set **Alias** to the Partner LU Alias value on the Communications Manager Worksheet (Table 43 on page 255).
40. Select **Partner LU is dependent** in the **Dependent partner LU** window, unless you are configuring for 3130 Release 2. For 3130 Release 2, select **Independent**.
41. (For 3130, Release 2, skip this step.) Set the **Uninterpreted name** to the Full PLU Name, LU Name value on the Communications Manager Worksheet (Table 43 on page 255). This is the rightmost field of the Full PLU name.
42. Select **Add**.
43. Select **OK**.
    You see the Create a Connection to a Peer Node window.
44. Select **OK**. You see the Connections List window.
45. Select **Close**. You see the Communications Manager Profile List Sheet window.

## Creating a Mode Definition

46. Select **SNA features** from the Communications Manager Profile List Sheet window.
47. Select **Configure**. You see the SNA Features List window.
48. Select **Modes** from the SNA Features List window.
49. Select **Create**. You see the Create a Mode Definition window.

50. Set **Mode name** to the **Transmission Service Mode Profile** - Mode Name value on the Communications Manager Worksheet (Table 43 on page 255).
51. Set **Class of service** to **#CONNECT**.
52. Set **Mode session limit** to **8**.
53. Set **Minimum contention winners** to **0**.
54. Set **Receive pacing window** to **4**.
55. Set **Maximum RU size** to **3840**.
56. Select **OK**. You see the SNA Features List window.
57. Select **Close**. You see the Communications Manager Profile List Sheet window.
58. Select **Close**. You see the Communications Manager Configuration Definition window.
59. Select **Close** again. Your configuration file is automatically verified.
60. Select **Close** to exit from Communications Manager Setup.
61. Shutdown and restart OS/2.

## Creating a Token-Ring-Attached PSF/2 Printing Device

To create a PSF/2 printing device that is attached using a token-ring attachment, follow these steps:

1. Open the PSF/2 group and then open the PSF/2 Control Panel.
2. Select the **Profile** menu item.
3. Select **New**.
4. Type the printer name in the **Device name** field.
5. Type a description of the printer in the **Description** field.
6. Select **Communication** from the **Attachment type** list.
7. Select the **Settings** push button.
8. In the Communication Attachment - Settings window you need to provide the following information:

   **LU alias** This must match the Local node name configured in Communications Manager/2, and the Remote LU name configured in the token-ring attachment configuration.

   **PLU alias** This must match the Partner LU alias configured in Communications Manager/2.

   **Mode name** This must match the Mode name configured in Communications Manager/2, and the Mode name in the token-ring attachment configuration.

   **Form definition** Type the form definition to be used as a default for this device. (Refer to the online help for sample form definitions.)
9. Select **OK**.
10. Select the **Device resolution** to be used when printing metafile data (produced by OS/2 applications) on this device. (Refer to the online help for additional information.)
11. Select **Create** to create the PSF/2 device.

Once the device has been created, create a queue by doing the following:

1. Select the **Options** menu item.
2. Select **Setup queues**.
3. Type in the name of the queue to be used with the token-ring attached device.

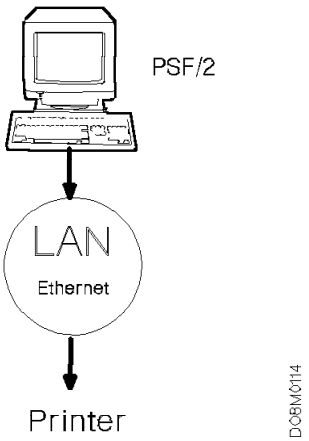
4. Type the description of the queue. This information is displayed under the icon for the queue on the OS/2 desktop.
5. Make sure that the **Device name** selected in the **Device** list is the token-ring attached device you created earlier.
6. Select **Setup** and you will see a printer object on the desktop.

**Note:** The definition described in this chapter refers *only* to the attachment of the printer to the PSF/2 print server. For example, this chapter has shown how to define a PSF/2 partner logical unit to describe your printer. You also need to define a partner logical unit to describe the PSF/2 connection to a host processor. If this is a new installation and you need information on configuring the PSF/2 for attachment to a host, please see whichever of the following manuals is appropriate in your environment:

For attachment to an S/370 using Communications Manager/2, see *IBM Print Services Facility for OS/2: A Network Configuration Guide for System/370 and Communications Manager/2*, S544-3911.

For attachment to an AS/400 using Communications Manager/2, see *IBM PSF for OS/2: An installation Cookbook for AS/400 and Token Ring Networks,*, G544-3966.

# Chapter 20. PSF/2 Ethernet TCP/IP Attachment




*Ethernet TCP/IP Attachment*

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and Ethernet TCP/IP attachment:

- Complete the attachment worksheet for your printer.
- Ask your LAN administrator for the following:
  - IP address
  - Subnet mask
  - Default gateway address
- Define your printer to PSF/2 as a TCP/IP attached device. See "Creating a TCP/IP-Attached PSF/2 Printing Device" on page 275.
- Create a PSF/2 queue for the printer. See "Create a PSF/2 Queue for the Printer" on page 276.

**Notes:**

1. This attachment requires TCP/IP to be installed on the OS/2 print server. For more information about setting up TCP/IP to coexist with OS/2, refer to *IBM Transmission Control Protocol/Internet Protocol Version 2 for OS/2: Installation and Administration*, SC31-6075.
2. **Important**—Before your printer will function correctly, you must do the following:
   - Make sure the latest available level of service for your PSF system is installed on the host.
   - Define the printer to your host environment.
   - Complete the worksheet so the customer engineer can install the printer and printer attachment.

   For more information about requirements, refer to:
   - Chapter 1, "Read This Chapter First" on page 1
   - *Advanced Function Presentation: Printer Information*, G544-3290
   - The Introduction and Planning Guide for your printer

## Ethernet TCP/IP Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and earlier versions of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets list the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If the **Attachment Parameter** and the **PSF/2 Value** columns list a parameter on the same line, the values you specify for those parameters must be the same.
- The **Acceptable Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

*Table 44. PSF/2 Ethernet TCP/IP Attachment Configuration Worksheet*

| Printer Attachment Parameter | PSF/2 Value | PSF/2 Queue | TCP/IP for OS/2 | Available Values | Value to Use |
|---|---|---|---|---|---|
| Install Status | | | | Yes or No | **Yes** |
| TCP Port | PORT number | | | 5001 to 65536 | **5001** |
| IP Address | Internet ADDRESS | | | X.X.X.X where X <=255 | |
| Subnet Mask | | | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | | X.X.X.X where X <=255 | |
| Standard MTU Size | | | MTU size | 60 to 1500 (bytes) | |
| IEEE802.3 MTU Size | | | MTU size | 60 to 1492 (bytes) | |
| Ethernet Type | | | | Standard or IEEE802.3 | |
| **Note:** The following parameters must match. | | | | | |
| | Device name | Device name | | | |

**Note:**

1. The MTU size must match the MTU size specified by the host system that is sending jobs to the printer.

*Table 45. PSF/2 Ethernet TCP/IP Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameter | PSF/2 Value | PSF/2 Queue | TCP/IP for OS/2 | Available Values | Value to Use |
|---|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> TCP/IP System | | | | | |
| Printer Name[2] | | | | 1-16 characters | |
| Name Server IP Address[2] | | | | X.X.X.X where X <=255 | |
| Domain Name[2] | | | | 1-32 characters | |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration -> Address | | | | | |
| Alternate Address | | | | 4000 0000 0000 to 7FFF FFFF FFFF | |
| MAC Address | | | | | Display only |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration | | | | | |
| Auto Start | | | | Yes or No | |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration -> TCP/IP | | | | | |
| IP Address | Internet ADDRESS | | | X.X.X.X where X <=255 | |
| Subnet Mask | | | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | | X.X.X.X where X <=255 | |
| Ethernet Type | | | | Standard or IEEE802.3 | |
| MTU Size | | | MTU size | 60 to 1500 (bytes) | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | |
| Source Attachment | | | | | **TCP/IP Ethernet** |
| IPDS TCP Port Number | PORT number | | | 5001 to 65536 | **5001** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | |
| Enable IPDS | | | | Enable or Disable | **Enable** |
| **Note:** The following parameters must match. | | | | | |
| | Device name | Device name | | | |

**Note:**

1. The MTU size must match the MTU size specified by the host system that is sending jobs to the printer.
2. Printer Name, Name Server IP Address, and Domain Name apply only when you use FTP, TFTP, or LPR to send ASCII jobs to the printer.

## PSF/2 Ethernet TCP/IP Configuration

Figure 87 shows a sample configuration for a Ethernet TCP/IP attachment. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 268 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
TCP Port:                   5001
IP address:                 9.99.5.240
Subnet mask:                255.255.255.128
Default gateway address:    9.99.25.1
Standard MTU size:          1500
IEEE8023 MTU size:          1492
Ethernet type:              Standard
```

*Figure 87. PSF/2 Ethernet TCP/IP Configuration*

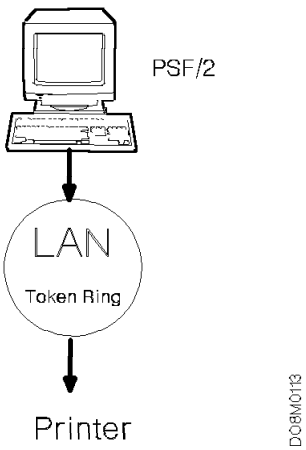
| Printer Attachment Parameter | Notes |
|---|---|
| **TCP port** | The TCP socket address of the attachment. This value must match the PORT Number value in the PSF/2 configuration. |
| **IP address** | The Internet protocol address of the printer in dotted decimal format.<br>You must get this value from your LAN administrator. It must match the Internet ADDRESS value in the PSF/2 configuration, and it must be unique. |
| **Subnet mask** | The mask identifying the local subnet in dotted decimal format.<br>You must get this value from your LAN administrator. If there is no local subnet, leave this field blank. |
| **Default gateway address** | The IP address of the default gateway in dotted decimal format.<br>You must get this value from your LAN administrator. |
| **Standard MTU size**<br>**IEEE802.3 MTU size** | MTU is an abbreviation for maximum transmission unit. The Standard MTU size ranges from 60 to 1500. The IEEE802.3 MTU size ranges from 60 to 1492.<br>The MTU size must match the MTU size specified by the host system that is sending jobs to the printer. For more information about setting up TCP/IP to coexist with OS/2, refer to *IBM Transmission Control Protocol/Internet Protocol Version 2 for OS/2: Installation and Administration*, SC31-6075. |
| **Ethernet type** | The Ethernet type, either IEEE802.3 or standard. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Default gateway address** | The IP address of the default gateway in dotted decimal format. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Printer name** | The name that identifies the printer in messages or mail generated for ASCII jobs, or when a user establishes an FTP session with the printer. The name can be up to 16 alphanumeric characters. The Printer Name cannot be blank; if you do not need a name or if the printer is for IPDS jobs only, use the default value.<br><br>This is also known as the **HOST NAME** or **SERVER NAME** in most TCP/IP environments.<br><br>The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Name server IP address** | The IP address of the name server in dotted decimal format. The name server allows the printer to recognize systems by name, rather than just by IP address. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Domain name** | The name of the domain the printer is in, up to 32 alphanumeric characters. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Alternate address** | The LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **TCP/IP Ethernet**. |
| **IPDS TCP Port number** | The TCP socket address of the attachment.<br><br>**Note:** This parameter is not unique, but it has been renamed and moved to a different menu tree. |
| **Enable IPDS** | Specify **ENABLED.**<br><br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |

# Chapter 21. PSF/2 Token-Ring TCP/IP Attachment




*Token-Ring TCP/IP Attachment*

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and token-ring TCP/IP attachment:

- Complete the attachment worksheet for your printer.
- Ask your LAN administrator for the following:
  - IP address
  - Subnet mask
  - Default gateway address
- Define your printer to PSF/2 as a TCP/IP attached device. See "Creating a TCP/IP-Attached PSF/2 Printing Device" on page 275.
- Create a PSF/2 queue for the printer. See "Create a PSF/2 Queue for the Printer" on page 276.

**Notes:**

1. This attachment requires TCP/IP to be installed on the OS/2 print server. For more information about setting up TCP/IP to coexist with OS/2, refer to *IBM Transmission Control Protocol/Internet Protocol Version 2 for OS/2: Installation and Administration*, SC31-6075.
2. **Important**—Before your printer will function correctly, you must do the following:
   - Make sure the latest available level of service for your PSF system is installed on the host.
   - Define the printer to your host environment.
   - Complete the worksheet so the customer engineer can install the printer and printer attachment.

   For more information about requirements, refer to:
   - Chapter 1, "Read This Chapter First" on page 1
   - *Advanced Function Presentation: Printer Information*, G544-3290
   - The Introduction and Planning Guide for your printer

## Token-Ring TCP/IP Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and earlier versions of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets list the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If the **Attachment Parameter** and the **PSF/2 Value** columns list a parameter on the same line, the values you specify for those parameters must be the same.
- The **Acceptable Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended.

## Attachment Worksheet (Not for 3130 Release 2)

*Table 46. PSF/2 Token-Ring TCP/IP Attachment Configuration Worksheet*

| Printer Attachment Parameter | PSF/2 Value | Setup Queue | TCP/IP for OS/2 | Available Values | Value to Use |
|---|---|---|---|---|---|
| Install Status | | | | Yes or No | **Yes** |
| TCP Port | PORT number | | | 5001 to 65536 | **5001** |
| IP Address | Internet ADDRESS | | | X.X.X.X where X <=255 | |
| Subnet Mask | | | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | | X.X.X.X where X <=255 | |
| MTU Size | | | MTU size | 60 to 4096 | |
| Ring Speed (Mbps) | | | | 4 or 16 | |
| Confine Broadcast | | | | Yes or No | |
| **Note:** The following parameters must match. | | | | | |
| | Device name | Device name | | | |

*Table 47. PSF/2 Token-Ring TCP/IP Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameter | PSF/2 Value | Setup Queue | TCP/IP for OS/2 | Available Values | Value to Use |
|---|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> TCP/IP System | | | | | |
| Printer Name[1] | | | | 1-16 characters | |
| Name Server IP Address[1] | | | | X.X.X.X where X <=255 | |
| Domain Name[1] | | | | 1-32 characters | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Protocols | | | | | |
| Enable SNA | | | | Enable or Disable | |
| Enable TCP/IP | | | | Enable or Disable | **Enable** |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> Address | | | | | |
| Alternate Address | | | | 400000000000 to 7FFFFFFFFFFF | |
| MAC Address | | | | | Display only |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration | | | | | |
| Auto Start | | | | Yes or No | |
| Ring Speed (Mbps) | | | | 4 or 16 | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration | | | | | |
| IP Address | Internet ADDRESS | | | X.X.X.X where X <=255 | |
| Subnet Mask | | | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | | X.X.X.X where X <=255 | |
| MTU Size | | | MTU size | 60 to 4096 | |
| Confine Broadcast | | | | Yes or No | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | | |
| Source Attachment | | | | | **TCP/IP TOKEN RING** |
| IPDS TCP Port Number | PORT number | | | 5001 to 65536 | **5001** |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | | |
| Enable IPDS | | | | Enable or Disable | **Enable** |
| **Note:** The following parameters must match. | | | | | |
| | Device name | Device name | | | |

**Notes:**

1. Printer Name, Name Server IP Address, and Domain Name apply only when you use FTP, TFTP, or LPR to send ASCII jobs to the printer.

## PSF/2 Token-Ring TCP/IP Configuration

Figure 88 shows a sample configuration for a Token-Ring TCP/IP attachment. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 274 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
TCP Port:                   5001
IP address:                 9.99.5.120
Subnet mask:                255.255.255.128
Default gateway address:    9.99.25.1
MTU size:                   2000
Ring speed:                 16
Confine broadcast:          No
```

*Figure 88. PSF/2 Token-Ring TCP/IP Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **TCP port** | The TCP socket address of the attachment. This value must match the PORT Number value in the PSF/2 configuration. |
| **IP address** | The Internet protocol (IP) address of the printer in dotted decimal format.<br>You must get this value from your LAN administrator. It must match the Internet ADDRESS value in the PSF/2 configuration, and it must be unique. |
| **Subnet mask** | The mask identifying the local subnet in dotted decimal format.<br>You must get this value from your LAN administrator. If there is no local subnet, leave this field blank. |
| **Default gateway address** | The IP address of the default gateway in dotted decimal format.<br>You must get this value from your LAN administrator. |
| **MTU size** | The maximum allowable length of IP packets. The MTU size must match the MTU size specified by the host system that is sending jobs to the printer. For more information about setting up TCP/IP to coexist with OS/2, refer to *IBM Transmission Control Protocol/Internet Protocol Version 2 for OS/2: Installation and Administration*, SC31-6075.<br>To make sure the Address Resolution Protocol is handled correctly, an MTU of 2000 is recommended, if the host can be set that high. |
| **Ring speed** | The ring speed of the network the adapter attaches to. This value must match the speed of the network; an incorrect value can cause the network to stop operating. |
| **Confine broadcast** | A yes or no indication of whether broadcast packets, notably ARP (Address Resolution Protocol) packets, are enabled to cross bridges to other rings.<br>**Note:** Be sure to specify NO to allow ARP packets to cross bridges. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Default gateway address** | The IP address of the default gateway in dotted decimal format. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Printer name** | The name that identifies the printer in messages or mail generated for ASCII jobs, or when a user establishes an FTP session with the printer. The name can be up to 16 alphanumeric characters. The Printer Name cannot be blank; if you do not need a name or if the printer is for IPDS jobs only, use the default value.<br><br>This is also known as the **HOST NAME** or **SERVER NAME** in most TCP/IP environments.<br><br>The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Name server IP address** | The IP address of the name server in dotted decimal format. The name server allows the printer to recognize systems by name, rather than just by IP address. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Domain name** | The name of the domain the printer is in, up to 32 alphanumeric characters. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Enable SNA** | Specifies whether the token ring is enabled or disabled for SNA. The default is **Enabled**. |
| **Enable TCP/IP** | Specifies whether the token ring is enabled or disabled for TCP/IP. Specify **Enabled** (the default value). |
| **Alternate address** | The LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **TCP/IP Token Ring**. |
| **IPDS TCP Port number** | The TCP socket address of the attachment.<br><br>**Note:** This parameter is not unique, but it has been renamed and moved to a different menu tree. |
| **Enable IPDS** | Specify **ENABLED.**<br><br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |

## Creating a TCP/IP-Attached PSF/2 Printing Device

To create a PSF/2 printing device that is attached by TCP/IP, follow these steps:

1. Open the PSF/2 group and then open the PSF/2 Control Panel.
2. Select the **Profile** menu item.
3. Select **New**.
4. Type the printer name in the **Device name** field.
5. Type a description of the printer in the **Description** field.
6. Select **TCP/IP** from the **Attachment type** list.
7. Select the **Settings** push button.
8. In the TCP/IP Attachments - Settings window, you need to provide:

   **IP address** Get this address from your network administrator. You can enter the IP address as a dotted decimal (such as, 9.99.9.98), or named address (such as, BIKER.BPC.BOULDER.COM). If you enter a named address (host name), your network administrator must make sure the host name is mapped to the IP address. This mapping is done in either the \ETC\HOSTS file or on the IP name server. In OS/2, the HOSTS file is normally located in TCPIP\ETC.

   **TCP/IP Port number** The default is **5001**. The port number identifies the appropriate internal process in the device. Normally this number should **NOT** be changed. However, in some cases it may need to be changed depending on the printer/device to which you are connecting.

   **Form definition** Type the form definition to be used as a default for this device (see the online help for sample form definitions).

   **Connect Timeout** Type the number of seconds the print server will wait for the printer to become available. After waiting the specified number of seconds, PSF/2 will no longer attempt to connect to the printer.

   A timeout value of zero means that PSF/2 will continue to attempt to connect to the printer and never timeout.

   If you are sharing the printer with another PSF, you may want to increase the connection timeout value. By increasing this value, PSF/2 will continue to attempt to connect with the printer until the timeout value has expired or a connection is established.

   Default: 30 seconds

   Valid values: 0 to 65535

9. Select the **Device resolution** to be used when printing metafile data (produced by OS/2 applications) on this device. Refer to the online help for additional information.
10. Select **OK**.
11. Select **Create** to create the PSF/2 device.

**Note:** The definition described in this chapter refers *only* to the attachment of the printer to the PSF/2 print server. For example, this chapter has shown how to define a PSF/2 partner logical unit to describe your printer. You also need to define a partner logical unit to describe the PSF/2 connection to a host processor. If this is a new installation and you need information on configuring the PSF/2 for attachment to a host, please see whichever of the following manuals is appropriate in your environment:

For attachment to an S/370 using Communications Manager/2, see *IBM Print Services Facility for OS/2: A Network Configuration Guide for System/370 and Communications Manager/2*, S544-3911.

For attachment to an AS/400 using Communications Manager/2, see *IBM Print Services Facility for OS/2: An Installation Cookbook for AS/400 and Token Ring Networks,*, G544-3966.

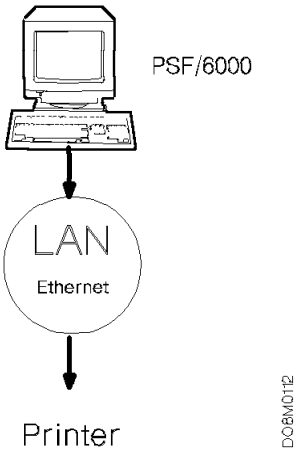
## Create a PSF/2 Queue for the Printer

Once the device has been created, create a queue by doing the following:

1. Select the **Options** menu item.
2. Select **Setup queues**.
3. Type in the name of the queue to be used with the TCP/IP attached device.
4. Type the description of the queue. This information is displayed under the icon for the queue on the OS/2 desktop.
5. Make sure that the **Device name** selected in the **Device** list is the TCP/IP-attached device you created earlier.
6. Select **Setup** and you will see a printer object on the desktop.

# PSF for AIX Attachments

# Chapter 22. PSF for AIX Ethernet TCP/IP Attachment




*PSF for AIX Ethernet TCP/IP Attachment*

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and Ethernet TCP/IP attachment:

- Complete the worksheet for your printer.
- Ask your LAN administrator for the following:
  - IP address
  - Subnet mask
  - Default gateway address
- Configure PSF for AIX. See “Configuring PSF for AIX” on page 287.

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

For more information about requirements, refer to:

- Chapter 1, “Read This Chapter First” on page 1
- *Advanced Function Presentation: Printer Information*, G544-3290
- The Introduction and Planning Guide for your printer

## PSF for AIX Ethernet TCP/IP Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets list the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If the **Attachment Parameter** and the **PSF for AIX Value** columns list a parameter on the same line, the values you specify for those parameters must be the same.
- The **Available Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended. More requirements regarding parameter values are described in the next section.

## Attachment Worksheet (Not for 3130 Release 2)

*Table 48. PSF for AIX Ethernet TCP/IP Attachment Configuration Worksheet*

| Printer Attachment Parameter | PSF for AIX Value | TCP/IP | Available Values | Value to Use |
|---|---|---|---|---|
| Install Status | | | Yes or No | **Yes** |
| TCP Port | PORT number | | 5001 to 65536 | |
| IP Address | Internet ADDRESS | | X.X.X.X where X <=255 | |
| Subnet Mask | | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | X.X.X.X where X <=255 | |
| Standard MTU Size | | MTU size | 60 to 1500 (bytes) | |
| IEEE802.3 MTU Size | | MTU size | 60 to 1492 (bytes) | |
| Ethernet Type | | | Standard or IEEE802.3 | |

*Table 49. PSF for AIX Ethernet TCP/IP Attachment Configuration Worksheet (3130 Release 2)*

| **Printer Attachment Parameter** | **PSF for AIX Value** | **TCP/IP** | **Available Values** | **Value to Use** |
|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> TCP/IP System | | | | |
| Printer Name[1] | | | | |
| Name Server IP Address[1] | | | X.X.X.X where X <=255 | |
| Domain Name[1] | | | | |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration -> Address | | | | |
| Alternate Address | | | 4000 0000 0000 to 7FFF FFFF FFFF | |
| MAC Address | | | | Display only |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration | | | | |
| Auto Start | | | Yes or No | |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration -> TCP/IP | | | | |
| IP Address | Internet ADDRESS | | X.X.X.X where X <=255 | |
| Subnet Mask | | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | X.X.X.X where X <=255 | |
| Ethernet Type | | | Standard or IEEE802.3 | |
| MTU Size | | MTU Size | 60 to 1500 | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | |
| Source Attachment | | | | **TCP/IP Ethernet** |
| IPDS TCP Port Number | PORT | | 5001 to 65536 | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | |
| Enable IPDS | | | | **Enable** |

**Notes:**

1. Printer Name, Name Server IP Address, and Domain Name apply only when you use FTP, TFTP, or LPR to send ASCII jobs to the printer.

## PSF for AIX Ethernet TCP/IP Configuration

Figure 89 shows a sample configuration for an PSF for AIX Ethernet TCP/IP configuration. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 284 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
TCP Port:                   5001
IP address:                 9.99.5.240
Subnet mask:                255.255.255.128
Default gateway address:    9.99.25.1
Standard MTU size:          1500
IEEE8023 MTU size:          1492
Ethernet type:              Standard
```

*Figure 89. PSF for AIX Ethernet TCP/IP Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **TCP port** | The TCP socket address of the attachment. This value must match the PORT Number value on the PSF for AIX Add a TCP/IP Attached Printer Panel (see topic 288). |
| **IP address** | The Internet Protocol address of the printer in dotted decimal format.<br><br>You are assigned this value by your LAN administrator. It must be unique, and it must match the Internet ADDRESS value on the PSF for AIX Add a TCP/IP Attached Printer Panel (see topic 288). |
| **Subnet mask** | The mask identifying the local subnet in dotted decimal format. If there is no local subnet, leave this field blank.<br><br>**Important!:** Once you define a subnet mask in the printer attachment configuration, you cannot reset the value to a blank.<br><br>You may get this value from your LAN administrator, or type **ifconfig tr0** (where **tr0** is the name of the interface adapter) at a RISC station attached to the same LAN as the printer. You may also retrieve the subnet mask by typing **smit tcpip** and then selecting **Minimum Configuration** and the appropriate interface adapter. |
| **Default gateway address** | The IP address of the default gateway in dotted decimal format.<br><br>You must get this value from your LAN administrator. If there is no local gateway, leave this field blank. |
| **Standard MTU size** | MTU is an abbreviation for maximum transmission unit. The MTU size for Standard Ethernet type ranges from 60 to 1500. The recommended size is 1500. The MTU size must match the MTU size specified by the host system that is sending jobs to the printer. |

| Printer Attachment Parameter | Notes |
|---|---|
| **IEEE802.3 MTU size** | The MTU size for IEEE802.3 Ethernet type ranges from 60 to 1492. The recommended size is 1492. The MTU size must match the MTU size specified by the host system that is sending jobs to the printer.<br><br>You may get both MTU sizes from your LAN administrator, or by typing **smit** at a RISC station attached to the same LAN as the printer. Once in smit, select **Devices**, and then **Communications**. From that menu select **Ethernet**. You will find the MTU sizes within windows underneath that selection. |
| **Ethernet type** | The Ethernet type, either IEEE802.3 or standard. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Default gateway address** | The IP address of the default gateway in dotted decimal format. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Printer name** | The name that identifies the printer in messages or mail generated for ASCII jobs, or when a user establishes an FTP session with the printer. The name can be up to 16 alphanumeric characters. The Printer Name cannot be blank; if you do not need a name or if the printer is for IPDS jobs only, use the default value.<br><br>This is also known as the **HOST NAME** or **SERVER NAME** in most TCP/IP environments.<br><br>The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Name server IP address** | The IP address of the name server in dotted decimal format. The name server allows the printer to recognize systems by name, rather than just by IP address. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Domain name** | The name of the domain the printer is in, up to 32 alphanumeric characters. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Alternate address** | The LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **TCP/IP Ethernet**. |
| **IPDS TCP Port number** | The TCP socket address of the attachment.<br><br>**Note:** This parameter is not unique, but it has been renamed and moved to a different menu tree. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Enable IPDS** | Specify **ENABLED.**<br><br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |

## Testing the Configuration Setup

To test the configuration setup, ping the printer from a workstation on the network. At the AIX command line, enter **ping <***ipaddress***>** where *ipaddress* is the IP address of the printer.

To stop the ping, hold down the **CTRL** key and press the **C** key.

A successful ping response will look similar to the following:

```
PING risc.sl.dfw.ibm.com (9.19.141.XXX) : 56 data bytes
64 bytes from 9.19.141.XXX: icmp_seq=0 ttl=255 time=12ms
64 bytes from 9.19.141.XXX: icmp_seq=1 ttl=255 time=7ms
64 bytes from 9.19.141.XXX: icmp_seq=2 ttl=255 time=7ms
```

If the ping response is not successful, try using different ports or cables.

Once the printer is successfully attached, use the **lpstat**, **enq -A**, or **qchk -A** commands to display the queues and their status.

## Configuring PSF for AIX

To configure PSF for AIX, do the following:

1. At the AIX command-line prompt, enter: **smit psfcfg**

   You see the Manage a PSF for AIX Printer Panel.

```
Manage a PSF for AIX Printer (such as Add and Remove Printers)

Move cursor to desired item and press Enter.

  List All Printers Defined to PSF for AIX
  Load Driver onto S/370 Channel Emulator/A adapter
  Add a Printer or PSF for AIX Queue
  Show / Change Characteristics of a Printer
  Remove a Printer



F1=Help             F2=Refresh          F3=Cancel           F8=Image
F9=Shell            F10=Exit            Enter=Do
```

2. Select **Add a Printer or PSF for AIX Queue**. You see The Add a Printer or PSF for AIX Queue panel.

```
                        Add a Printer or PSF for AIX Queue

    Move cursor to desired item and press Enter.

      S/370 Channel Emulator/A Adapter
      AIX-Defined (Parallel, Serial, or LAN)
      TCP/IP


    F1=Help         F2=Refresh          F3=Cancel        F8=Image
    F9=Shell        F10=Exit            Enter=Do
```

3. Select **TCP/IP**. You see the Add a TCP/IP Attached Printer panel.

```
                        Add a TCP/IP Attached Printer

  Type or select values in entry fields.
  Press Enter AFTER making all desired changes.


                                                    [ Entry Fields ]
   * Data stream type                                   IPDS
   * Printer NAME                                     [psf3935]          /
   * Internet ADDRESS                                 [9.99.5.240]
   * PORT number                                      [5001]             #
   * Number of QUEUE DEVICES                          [4]                #
   * Connection TIMEOUT (seconds)                     [30]               #
     Description                                       Ethernet TCP/IP

    To specify other characteristics after you add
    a printer, select Change Characteristics of
    a Printer from the
    Manage a PSF for AIX Printer Definition


F1=Help             F2=Refresh          F3=Cancel           F4=List
F5=Undo             F6=Command          F7=Edit             F8=Image
F9=Shell            F10=Exit            Enter=Do
```

*Figure 90. Add a PSF for AIX TCP/IP Attached Printer*

4. Fill in the fields, and then press Enter.

   **Notes:**

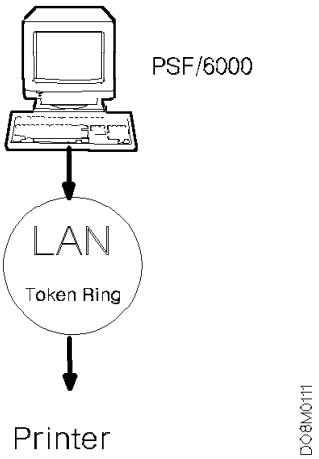
   a. The PORT number must match the TCP Port parameter in the Ethernet TCP/IP Attachment configuration (see topic 280).

      This example uses the default value, 5001.

   b. The Internet ADDRESS must match the IP Address parameter in the Ethernet TCP/IP Attachment configuration (see topic 280). If you enter a named address (host name), your network administrator must make sure the host name is mapped to the IP address. This mapping is done in either the /etc/hosts file or on the IP name server.

5. Exit SMIT.

# Chapter 23. PSF for AIX Token Ring TCP/IP Attachment




*PSF for AIX Token Ring TCP/IP Attachment*

## Chapter Overview

The following list describes tasks you need to do before you can use your printer and token-ring TCP/IP attachment:

- Complete the worksheet for your printer.
- Ask your LAN administrator for the following:
  - IP address
  - Subnet mask
  - Default gateway address
- Configure PSF for AIX. See “Configuring PSF for AIX” on page 296.

**Important**—Before your printer will function correctly, you must do the following:

- Make sure the latest available level of service for your PSF system is installed on the host.
- Define the printer to your host environment.
- Complete the worksheet so the customer engineer can install the printer and printer attachment.

For more information about requirements, refer to:

- Chapter 1, “Read This Chapter First” on page 1
- *Advanced Function Presentation: Printer Information*, G544-3290
- The Introduction and Planning Guide for your printer

## PSF for AIX Token Ring TCP/IP Attachment Worksheets

**Important**

Note that there are two worksheets: one for Release 2 of the 3130 and one for the 3935, InfoPrint 60, 3160, and Release 1 of the 3130. If you are not certain about what worksheet to use, please contact your marketing representative.

The attachment worksheets list the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If the **Attachment Parameter** and the **PSF for AIX Value** columns list a parameter on the same line, the values you specify for those parameters must be the same.
- The **Available Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended. More requirements regarding parameter values are described in the next section.

## Attachment Worksheet (Not for 3130 Release 2)

*Table 50. PSF for AIX Token Ring TCP/IP Attachment Configuration Worksheet*

| Printer Attachment Parameter | PSF for AIX Value | TCP/IP | Available Values | Value to Use |
|---|---|---|---|---|
| Install Status | | | Yes or No | **Yes** |
| TCP Port | PORT number | | 5001 to 65536 | |
| IP Address | Internet ADDRESS | | X.X.X.X where X <=255 | |
| Subnet Mask | | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | X.X.X.X where X <=255 | |
| MTU Size | | MTU size | 60 to 4096 | |
| Ring Speed (Mbps) | | | 4 or 16 | |
| Confine Broadcast | | | Yes or No | |

*Table 51. PSF for AIX Token Ring TCP/IP Attachment Configuration Worksheet (3130 Release 2)*

| Printer Attachment Parameter | PSF for AIX Value | TCP/IP | Available Values | Value to Use |
|---|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> TCP/IP System | | | | |
| Printer Name[1] | | | | |
| Name Server IP Address[1] | | | X.X.X.X where X <=255 | |
| Domain Name[1] | | | | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Protocols | | | | |
| Enable SNA | | | Enable or Disable | |
| Enable TCP/IP | | | Enable or Disable | **Enable** |
| **Note:** The menu tree for the following parameters is Attachments -> Ethernet -> Configuration -> Address | | | | |
| Alternate Address | | | 4000 0000 0000 to 7FFF FFFF FFFF | |
| MAC Address | | | | Display Only |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration | | | | |
| Auto Start | | | Yes or No | |
| Ring Speed (Mbps) | | | 4 or 16 | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring -> Configuration -> TCP/IP | | | | |
| IP Address | Internet ADDRESS | | X.X.X.X where X <=255 | |
| Subnet Mask | | | X.X.X.X where X <=255 | |
| Default Gateway Address | | | X.X.X.X where X <=255 | |
| MTU Size | | MTU size | 60 to 4096 | |
| Confine Broadcast | | | Yes or No | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS -> Configuration | | | | |
| Source Attachment | | | | **TCP/IP Token Ring** |
| IPDS TCP Port Number | PORT | | 5001 to 65536 | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup -> IPDS | | | | |
| Enable IPDS | | | | **Enable** |

**Notes:**

1. Printer Name, Name Server IP Address, and Domain Name apply only when you use FTP, TFTP, or LPR to send ASCII jobs to the printer.

## PSF for AIX Token Ring TCP/IP Configuration

Figure 91 shows a sample configuration for an PSF for AIX Token Ring TCP/IP configuration. The text following the figure describes each attachment parameter in detail.

**Note:** The following sample is for printers other than 3130 Release 2. While most parameters apply to any printer, some do not apply to the 3130 Release 2. In addition, the 3130 Release 2 includes some parameters not listed in this sample. See "3130 Release 2 Printer Attachment Parameters" on page 294 for a description of parameters unique to the 3130 Release 2.

```
Installed:                  Yes
TCP Port:                   5001
IP address:                 9.99.5.120
Subnet mask:                255.255.255.128
Default gateway address:    9.99.25.1
MTU size:                   4096
Ring speed:                 4
Confine broadcast:          No
```

*Figure 91. PSF for AIX Token Ring TCP/IP Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **TCP port** | The TCP socket address of the attachment. This value must match the PORT Number value on the PSF for AIX Add a TCP/IP Attached Printer Panel (see topic 297). |
| **IP address** | The Internet Protocol address of the printer in dotted decimal format.<br><br>You are assigned this value from your LAN administrator. It must be unique, and it must match the Internet ADDRESS value on the PSF for AIX Add a TCP/IP Attached Printer Panel (see topic 297). |
| **Subnet mask** | The mask identifying the local subnet in dotted decimal format.<br><br>If there is no local subnet, leave this field blank.<br><br>**Important!:** Once you define a subnet mask in the printer attachment configuration, you cannot reset the value to a blank.<br><br>You may get this value from your LAN administrator, or type **ifconfig tr0** (where **tr0** is the name of the interface adapter) at a RISC station attached to the same LAN as the printer. You may also retrieve the subnet mask by typing **smit tcpip** and then selecting **Minimum Configuration** and the appropriate interface adapter. |
| **Default gateway address** | The IP address of the default gateway in dotted decimal format.<br><br>You must get this value from your LAN administrator. If there is no local gateway, leave this field blank. |
| **MTU size** | MTU (Maximum Transmission Unit) is the maximum allowable length of IP packets. The recommended size is **4096**. The MTU size must match the MTU size specified by the host system that is sending jobs to the printer.<br><br>You may get this value from your LAN administrator, or by typing **smit** at a RISC station attached to the same LAN as the printer. Once in smit, select **Devices**, and then **Communications**. From that menu select **Token Ring**, then **Services**, and then **Change/Show Characteristics of a Network Interface Driver**. The value in "Maximum IP PACKET SIZE for THIS DEVICE" field is the **MTU size**. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Ring speed** | The ring speed of the network the adapter attaches to. This value must match the speed of the network; an incorrect value can cause the network to stop operating.<br><br>You may get this value from your LAN administrator, or by typing **smit tcpip** on a RISC station attached to the same ring. Once in smit, select **Minimum Configuration and Startup** and then the appropriate interface adapter. |
| **Confine broadcast** | A yes or no indication of whether broadcast packets —notably ARP (Address Resolution Protocol) packets— are enabled to cross bridges to other rings.<br><br>**Note:** Be sure to specify **NO** to allow ARP packets to cross bridges. |

## 3130 Release 2 Printer Attachment Parameters

The following printer attachment parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Default gateway address** | The IP address of the default gateway in dotted decimal format. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Printer name** | The name that identifies the printer in messages or mail generated for ASCII jobs, or when a user establishes an FTP session with the printer. The name can be up to 16 alphanumeric characters. The Printer Name cannot be blank; if you do not need a name or if the printer is for IPDS jobs only, use the default value.<br><br>This is also known as the **HOST NAME** or **SERVER NAME** in most TCP/IP environments.<br><br>The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Name server IP address** | The IP address of the name server in dotted decimal format. The name server allows the printer to recognize systems by name, rather than just by IP address. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Domain name** | The name of the domain the printer is in, up to 32 alphanumeric characters. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **Enable SNA** | Specifies whether the token ring is enabled or disabled for SNA. The default is **Enabled**. |
| **Enable TCP/IP** | Specifies whether the token ring is enabled or disabled for TCP/IP. Specify **Enabled** (the default value). |
| **Alternate address** | The LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. |
| **MAC Address** | This is a read-only field that displays the MAC (Medium access control) number of the printer. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Source attachment** | The attachment you use to send IPDS data streams. Specify **TCP/IP Token Ring**. |

| Printer Attachment Parameter | Notes |
|---|---|
| **IPDS TCP Port number** | the TCP socket address of the attachment.<br><br>**Note:** This parameter is not unique, but it has been renamed and moved to a different menu tree. |
| **Enable IPDS** | Specify **ENABLED.**<br><br>**Note:** You will find ENABLE IPDS in two places: under ATTACHMENTS, APPLICATION SETUP, it specifies which application is enabled for printing. Under SETUP, MACHINE CONFIGURATION, DATA STREAMS, it specifies which data streams are enabled. In both places, it must be ENABLED. |

## Testing the Configuration Setup

To test the configuration setup, ping the printer from a workstation on the network. At the AIX command line, enter **ping <***ipaddress***>** where *ipaddress* is the IP address of the printer.

To stop the ping, hold down the **CTRL** key and press the **C** key.

A successful ping response will look similar to the following:

```
PING risc.sl.dfw.ibm.com (9.19.141.XXX) : 56 data bytes
64 bytes from 9.19.141.XXX: icmp_seq=0 ttl=255 time=12ms
64 bytes from 9.19.141.XXX: icmp_seq=1 ttl=255 time=7ms
64 bytes from 9.19.141.XXX: icmp_seq=2 ttl=255 time=7ms
```

If the ping response is not successful, try using different ports or cables.

Once the printer is successfully attached, use the **lpstat**, **enq -A**, or **qchk -A** commands to display the queues and their status.

## Configuring PSF for AIX

To configure PSF for AIX, do the following:

1. At the AIX command-line prompt, enter: **smit psfcfg**

   You see the Manage a PSF for AIX Printer Panel.

```
        Manage a PSF for AIX Printer (such as Add and Remove Printers)

Move cursor to desired item and press Enter.

  List All Printers Defined to PSF for AIX
  Load Driver onto S/370 Channel Emulator/A adapter
  Add a Printer or PSF for AIX Queue
  Show / Change Characteristics of a Printer
  Remove a Printer



F1=Help             F2=Refresh          F3=Cancel           F8=Image
F9=Shell            F10=Exit            Enter=Do
```

2. Select **Add a Printer or PSF for AIX Queue**. You see The Add a Printer or PSF for AIX Queue panel.

```
                      Add a Printer or PSF for AIX Queue

    Move cursor to desired item and press Enter.

      S/370 Channel Emulator/A Adapter
      AIX-Defined (Parallel, Serial, or LAN)
      TCP/IP


    F1=Help         F2=Refresh          F3=Cancel        F8=Image
    F9=Shell        F10=Exit            Enter=Do
```

3. Select **TCP/IP**. You see the Add a TCP/IP Attached Printer panel.

```
                        Add a TCP/IP Attached Printer

  Type or select values in entry fields.
  Press Enter AFTER making all desired changes.


                                                  [ Entry Fields ]
   * Data stream type                                 IPDS
   * Printer NAME                                    [psf3935]          /
   * Internet ADDRESS                                [9.99.5.120]
   * PORT number                                     [5001]             #
   * Number of QUEUE DEVICES                         [4]                #
   * Connection TIMEOUT (seconds)                    [30]               #
     Description                                      Token-Ring TCP/IP

    To specify other characteristics after you add
    a printer, select Change Characteristics of
    a Printer from the
    Manage a PSF for AIX Printer Definition


F1=Help             F2=Refresh          F3=Cancel           F4=List
F5=Undo             F6=Command          F7=Edit             F8=Image
F9=Shell            F10=Exit            Enter=Do
```

*Figure 92. Add a TCP/IP Attached Printer*

4. Fill in the fields, and then press Enter.

   **Notes:**

   a. The PORT number must match the TCP Port parameter in the Token Ring TCP/IP Attachment configuration (see topic 290).

      This example uses the default value, 5001.

   b. The Internet ADDRESS must match the IP Address parameter in the Token Ring TCP/IP Attachment configuration (see topic 290). If you enter a named address (host name), your network administrator must make sure the host name is mapped to the IP address. This mapping is done in either the /etc/hosts file or on the IP name server.

5. Exit SMIT.

# PC Parallel Attachment

# Chapter 24. PC Parallel Configuration

## Important -- Read This First

Before the customer engineer installs the PC Parallel attachment, you need to do the following:

- Complete the worksheet (Table 52 on page 302). The worksheet helps you gather all the information you need **before** your printer can be installed.

## PC Parallel Attachment Worksheet

*Table 52. PC Parallel Attachment Worksheet*

| Attachment Parameters | | Available Values | Value to Use |
|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> PC Parallel -> Configuration | | | |
| Honor Init | | On or Off | |
| Mode | | Normal or Binary | |
| Spooling | | Yes or No | |
| Data stream sensing | | Auto detect<br>Postscript only<br>PCL only | |
| Timeout (Sec) | | 0 to 999 seconds | |
| **Note:** The menu tree for the following parameters is Attachments -> PC Parallel -> Configuration -> Separator Pages | | | |
| Print Header Page | | Yes or No | |
| Print Trailer Page | | Yes or No | |
| Source Tray | | Main tray<br>Lower sub tray<br>Upper sub tray<br>Side tray<br>Top front tray | |
| **Note:** The menu tree for the following parameter is Attachments -> PC Parallel -> Configuration | | | |
| Job boundary search | | On or Off | |
| Auto Start | | Yes or No | |

## How to Use the Worksheet

The attachment worksheet (Table 52 on page 302) lists the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment.

- If the **Attachment Parameter** and the host configuration columns list a parameter on the same line, the values you specify for those parameters must be the same.
- The **Available Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the *only* column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended. More requirements regarding parameter values are described in the next section.

# PC Parallel Configuration

Figure 93 shows a sample configuration for a PC Parallel printer attachment.

```
Honor Init                On
Mode                      Binary
Spooling                  Yes
Data stream sensing       Auto detect
Timeout (sec)             10
Print header page         Yes
Print trailer page        Yes
Source tray               Upper sub tray
Job boundary search       Yes
Auto start                Yes
```

*Figure 93. Sample PC Parallel Configuration*

| Printer Attachment Parameter | Notes |
|---|---|
| **Honor Init** | Specifies how the 3130 handles INIT signals sent from the host.<br>• ON -- the 3130 treats the INIT signal as a job boundary marker (this is the default).<br>• OFF -- the 3130 ignores INIT signals. |
| **Mode** | Specifies the data transfer mode: normal or binary. |
| **Spooling** | A yes or no indication of whether the printer stores jobs on its hard drive or sends them directly to the printer. Spooling is the only option available for jobs sent using TFTP.<br>• If SPOOLING is set YES, the default, the printer temporarily stores jobs on its hard drive before it prints them. If there is not enough space on the drive, the file transfer fails.<br>• If Spooling is set NO, the printer does not store jobs on its hard drive before it prints them. This provides a higher level of security and it allows you to send any size job to the printer. If the printer is busy and there is not enough buffer space, the transfer will appear to be hung while it waits for the printer to process the job. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Data stream sensing** | Specifies how the printer treats data streams it receives over this attachment.<br>• Auto detect -- the printer examines the data stream and processes it accordingly. This is the default.<br>• Postscript only -- the printer treats all data streams as PostScript data streams.<br>• PCL only -- the printer treats all data streams as PCL data streams. |
| **Timeout (sec)** | The number of seconds the printer will spend waiting for data before it determines the job is complete. The valid range is 10 to 300 seconds. |
| **Print header page** | A yes or no indication of whether the printer prints a default header page for each job it receives over the attachment. The default is Yes. |
| **Print trailer page** | A yes or no indication of whether the printer prints a default trailer page for each job it receives over the attachment. The default is Yes. |
| **Source tray** | The tray the printer uses for header and trailer pages. The default is the upper sub tray. |
| **Job boundary search** | Specifies whether the attachment automatically searches for job boundaries in the data or waits for a timeout to determine job boundaries.<br>• YES-The 3130 attempts to separate jobs based on incoming data. (The default is YES.)<br>• NO-The 3130 waits for a timeout before closing a job and committing it to print. |
| **Auto Start** | A yes or no indication of whether the attachment is automatically started when the printer is powered on following a shutdown. The default is Yes. |

# ASCII LAN (TCP/IP) Attachment

# Chapter 25. ASCII LAN (TCP/IP) Configuration

## Important -- Read This First

Before the customer engineer installs the ASCII LAN attachment, you need to do the following:

- Complete the worksheet (Table 53 on page 308). The worksheet helps you gather all the information you need **before** your printer can be installed.
- Follow the steps listed in “Configuring for LAN” on page 341.

## ASCII LAN (TCP/IP) Attachment Worksheet

*Table 53. ASCII LAN (TCP/IP) Attachment Worksheet*

| Attachment Parameters | | Available Values | Value to Use |
|---|---|---|---|
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring or Ethernet | | | |
| Enable Status | | Enable or Disable | ENABLE |
| **Note:** The menu tree for the following parameters is Attachments -> TCP/IP System | | | |
| Printer Name<br>Name Server IP Address<br>Domain Name | | x.x.x.x. where x <=255 | |
| **Note:** The menu tree for the following parameters is Attachments -> Token Ring or Ethernet -> Configuration | | | |
| Protocols<br>Enable TCP/IP | | YES or NO | YES |
| Ring Speed (TR Only) | | 4MB or 16MB | |
| Auto Start | | Yes or No. | YES |
| TCP/IP IP Address<br>Subnet Mask<br>Default Gateway Address<br>MTU Size (bytes) (TR only)<br>MTU Size (bytes) (Ethernet only)<br>Confine Broadcast (TR only)<br>Ethernet Type (Ethernet only) | | x.x.x.x where x <=255<br>x.x.x.x where x <=255<br>x.x.x.x where x <=255<br>60 to 4096<br>60 to 1500<br>Yes or No<br>Standard or IEEE802.3 | |
| **Note:** The menu tree for the following parameters is Attachments -> Application Setup | | | |
| LPR, FTP or TFTP<br>Enable Status<br>Configuration<br>Spooling<br>Data Stream Sensing | | Enable or Disable<br>Yes or No<br>Auto Detect, PS only or PCL only | ENABLE<br>YES<br>AUTO DETECT |
| **Note:** The menu tree for the following parameters is Setup->Machine Configuration->Job Management | | | |
| ASCII LAN Separator Page<br>Print Header Page<br>Print Trailer Page<br>Source Tray | | Always\|Group\|Never<br>Always\|Group\|Never<br>Main Tray<br>Lower Sub Tray<br>Upper Sub Tray<br>Side Tray<br>Top Front Tray | |
| Spool Scheduling | | First in First Out<br>Shortest Job Next | |
| Stacker priority<br>Base Stacker<br>Upper Stacker<br>Side Stacker | | High\|Medium\|Low<br>High\|Medium\|Low<br>High\|Medium\|Low | |

## How to Use the Worksheet

The attachment worksheet (Table 53 on page 308) lists the attachment parameters in the leftmost column. You must complete the **Value to Use** column for all attachment parameters before the customer engineer can install the attachment:

- If the **Attachment Parameter** and the host configuration columns list a parameter on the same line, the values you specify for those parameters must be the same.
- The **Available Values** column lists the valid range of values for the attachment parameter.
- The **Value to Use** column is the **only** column you need to complete. If the **Value to Use** column displays a value in **bold**, the value is required or recommended. More requirements regarding parameter values are described in the next section.

## Sample ASCII TCP/IP Configuration

Figure 94 shows a sample configuration for an Ethernet TCP/IP configuration. The text following the figure describes each attachment parameter in detail.

**Note:** the following sample applies only to the 3130 Release2.

```
Printer Name:             prt3130
Name Server IP Address:   9.99.5.101
Domain Name:              prt.com
IP Address:               9.99.5.130
Subnet Mask:              255.255.255.0
Default Gateway Address:  9.99.5.1
Ethernet Type:            Standard
MTU Size:                 1492
```

*Figure 94. Sample ASCII TCP/IP Configuration*

**3130 Release 2 Printer Attachment Parameters:** The following parameters are unique to Release 2 of the 3130 printer.

| Printer Attachment Parameter | Notes |
|---|---|
| **Printer Name.** | The name that identifies the printer in messages or mail generated for ASCII jobs, or when a user establishes an FTP session with the printer. This name is often referred to as the HOST NAME or SERVER NAME when using LPR or FTP to this printer. The name can be up to 16 alphanumeric characters. The Printer Name cannot be blank.<br><br>This is also known as the **HOST NAME** or **SERVER NAME** in most TCP/IP environments.<br><br>**Note:** The 3130 has an internal queue named 'afccu2' for ASCII LAN jobs. This name is not configurable and is often referred to as the PRINTER NAME when using LPR or FTP to transfer print jobs. See the example on the following page. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Name Server IP Address** | The IP address of the name server in dotted decimal format. The name server allows the printer to recognize systems by name, rather than just by IP address. The value you specify will apply to all TCP/IP attachments your printer uses.<br><br>**Note:** Although configuring a name server can often resolve problems making a TCP/IP connection, IBM does not recommend you use a name server, because it is known to cause printing delays. |
| **Domain Name** | The name of the domain the printer is in, up to 32 alphanumeric characters. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **IP Address** | The Internet Protocol address of the printer in dotted decimal format.<br><br>You are assigned this value by your LAN Administrator. It must be unique and it must match the IP address used to LPR, FTP or TFTP files to this printer. |
| **Subnet Mask** | The mask identifying the local subnet in dotted decimal format. You may get this value from your LAN administrator. |
| **Default gateway address** | The IP address of the default gateway in dotted decimal format. The value you specify will apply to all TCP/IP attachments your printer uses. |
| **MTU size** | The maximum transmission unit size. The range for Ethernet is 60 to 1500 for Standard, and 60 to 1492 for IEEE802.3. The recommended size for Standard Ethernet is 1500. The recommended size for IEEE802 Ethernet is 1492.<br><br>**Note:** The MTU size must match the MTU size specified by the host system that is sending jobs to the printer. You may get this value from your LAN administrator. |
| **Ethernet Type** | Standard or IEEE802.3 |
| **Confine Broadcast** | A YES or NO indication of whether broadcast packets, notably ARP (Address Resolution Protocol) packets, are enabled to cross bridges to other rings.<br><br>**Note:** Be sure to specify **NO** to allow packets to cross bridges. |
| **Alternate Address** | The LAN adapter unique address for the printer. The address must be different from other addresses on the LAN. |
| **MAC Address** | This is a read-only field that displays the MAC (medium access control) number of the printer. |
| **Auto Start** | Specifies whether the attachment is automatically started when the printer is powered on following a shutdown. |
| **Enable Status** | Status of the attachment or application.<br><br>**Note:** For ASCII data streams, note that you must enable the Attachment (Ethernet or Token Ring), the Protocol (TCP/IP for Token Ring), and the LPR, FTP, or TFTP features you desire to use. |
| **Spooling** | A YES or NO indication of whether the printer stores jobs on its hard drive or sends them directly to the printer. Spooling is the only option available for jobs sent using TFTP. Spooling is also recommended when sharing the 3130 with IPDS hosts or with multiple LAN clients. |

| Printer Attachment Parameter | Notes |
|---|---|
| **Data Stream Sensing** | Specifies how the printer treats data streams it receives over this attachment.<br>• **Auto detect** - The printer determines if the data stream is PCL or Postscript and processes it accordingly.<br>• **Postscript only**- The printer treats all data streams as PostScript data.<br>• **PCL only** - The printer treats all data streams as PCL data. |
| **Spool Scheduling** | An indication of how you want the printer to schedule ASCII jobs when SPOOLING is set to YES. You have two choices:<br>• First-in-first-out.<br>• Shortest job next.<br><br>**Note:** The printer can simultaneously process PCL and PostScript jobs; therefore, even though PCL and PostScript jobs may appear to be in the same queue, the printer schedules them separately. |
| **Stacker Priority** | Allows you to prioritize stackers as HIGH, MEDIUM, or LOW. The printer can process jobs according to stacker priority; jobs sent to the high-priority stacker are processed before jobs sent to the medium or low-priority stacker. |

## LPR and FTP Examples

Using the values shown in the Sample ASCII TCP/IP Configuration on the previous pages, the following are samples of how to print to the 3130 using LPR and FTP.

## LPR Samples

Figure 95 is a sample of setting up a queue for LPR use from a TCP/IP capable workstation.

```
SERVER NAME:              prt3130
PRINTER NAME:             afccu2
```

*Figure 95. LPR Sample*

## LPR Command Line Example

lpr -sprt3130 -pafccu2 myfile.pcl

## FTP Samples

If you set SPOOLING to YES for FTP data streams, the printer stores the job in its internal memory and users must use the FTP SITE Print command to move the file to the print queue. Note that only one FTP SITE command can be specified at a time.

## FTP Sample with SPOOLING ON

ftp 9.99.5.130
NAME:print
PASSWORD:myname
put myfile.pcl
site print myfile.pcl

## FTP Sample with SPOOLING OFF

FTP 9.99.5.130
NAME:print
PASSWORD:myname
put myfile.pcl

**Note:** The FTP SITE SPOOL and FTP SITE DIRECT commands can be used to set the 3130 spooling status on or off. The FTP SITE STATUS can be used to monitor the 3130 queue when operating with SPOOLING OFF.

| LPR/FTP Parameters | Notes |
|---|---|
| **SERVER NAME.** | When configured on an LPR capable workstation to describe the 3130 printer, this value must match the PRINTER NAME configured in the 3130 Attachments ->TCP/IP System configuration. |
| **PRINTER NAME** | When configured on an LPR capable workstation to describe the 3130 printer, this value must be afccu2. This is the internal ASCII queue name of the 3130 printer and is not configurable. |
| **-s** | The value for -s (server name) must match the PRINTER NAME configured in the 3130 Attachments->TCP/IP System configuration. |
| **-p** | The value for -p (printer name) must be afccu2. This is the internal ASCII queue name of the 3130 printer and is not configurable. |
| **ftp NAME:** | The 3130 user name used for ftp login. This value should be ′print′ for the 3130 printer. |
| **ftp PASSWORD:** | The password used for ftp login. This value can be any alphanumeric value desired and will be printed on the 3130 header page if header pages are turned on in the ASCII LAN Separator Page configuration. IBM recommends using your name or LAN userid. |
| **ftp SITE commands** | For complete details on the supported ftp site commands, reference Chapter 1 in the *IBM 3130 System Administration Guide.* |

## Hints and Tips

- Many TCP/IP clients are case sensitive. If unable to execute lpr or ftp in lower case, try upper case.
- Be sure to disable the attachment before making configuration changes, and re-enable the attachment when you are finished making configuration changes.

## Novell and IBM LAN Server

For configuration of the Network Print Server feature in Novell and IBMfile Server environments, use Chapter 24 on PC Parallel Configuration and the documentation supplied with the Network Print Server adapter.

# NetWare Attachment

# Chapter 26. NetWare Attachment

## Overview

The internal NetWare attachments for Token Ring and Ethernet take the place of the IBM Network Print Server for NetWare attachments. The Network Print Server is then used for only those who require NETBIOS (attached to LAN SERVER or LAN MANAGER that does not have TCP/IP loaded on the platform), or who need to use remote printer mode for NetWare or for other protocols.

This internal NetWare attachment provides NetWare printing from NetWare 3.11, 3.12, 4.0, 4.01, and 4.1 File Servers over Token-Ring and Ethernet LANs. For a NetWare 4.x server, the directory must be in bindery emulation for the directory where the print server name is inserted.

The attachment offers only the higher performing print server function.

Basic configuration requires using only PCONSOLE software supplied by Novell on their file servers, accessible from a client workstation. This does not require entering anything at the printer console if Ethernet is the attachment from which NetWare prints. However, the CE must install NetWare from the printer console.

There is also an optional Advanced Configuration sub-menu that can be used at the printer for those who want to limit the file servers that are checked for print queues or who want to give a print server a password.

The basic configuration is as follows:

- The customer uses PCONSOLE on an already installed NetWare file server to configure the print queue and the print server that services the queue.
- The print server on the 3130 is then started by enabling NetWare.
- The print server name defaults to IBMxxxxx, where xxxxx are the last five digits of the printer serial number. The serial number is found on the printer serial number plate. It can also be double-checked by viewing it on the printer console or by printing the machine information, which lists the serial number.

The optional advanced configuration allows the customer to indicate a particular file server name that the print server attaches to. This allows the customer in a large network of file servers to specify the file server name that the print server attaches to. This would be used after a test print has been obtained using the basic configuration to validate the attachment.

If PCONSOLE is used to indicate ″File Servers to be Serviced″ for additional file servers, then the print server logs in to those file servers also. This eliminates the additional start-up time and network traffic to query every file server on the network and every queue on all those file servers for the queues containing this print server name.

A matching password for the print server may also be entered to protect jobs that are on the file server queues.

## Example Configuration on PCONSOLE

**Note:** In the configuration examples throughout this chapter, actions that you perform are in regular type. Text that you type is *italicized*. Menu choices that appear on the monitor are in UPPER CASE.

The following is an example configuration procedure on PCONSOLE:

-Log into server as user (with Admin privileges) from client.
Type *cd public* to change the directory.
Type *pconsole*; press Enter.
- Highlight PRINT SERVER INFORMATION and press Enter.
Press Insert key.
Type the print server name from printer.
- Highlight PRINT SERVER CONFIGURATION and press Enter.
Highlight FILE SERVERS TO BE SERVICED and press Enter.
Select this server; press Enter.
- Highlight PRINTER CONFIGURATION and press Enter.
Select 0; (you must use slot zero); press Enter.
Name: PRINTER 0 (You can take the default or rename.)
Type: REMOTE/OTHER
(F10 saves changes)
- PRINT QUEUE INFORMATION: Press the Insert key.
Type the queue name you desire.
Select the queue name you inserted above.
Highlight QUEUE OPERATORS and press Enter.
Insert an operator.
Highlight QUEUE USERS and press Enter.
Insert a user.
- Highlight PRINT SERVER INFORMATION and press Enter.
Select print server name from above.
Highlight PRINT SERVER CONFIGURATION and press Enter.
- Highlight QUEUES SERVICED BY PRINTER and Press Enter.
Select Printer 0.
Press the Insert key.
Type queue name from above.
Select the queue name inserted above. Press Enter.
PRIORITY: 1

**Notes:**

- In PCONSOLE you must select printer slot zero.
- In PCONSOLE the printer name does not matter.
- When you use PCONSOLE on a NetWare 4.x server, make sure the directory is in bindery emulation for the directory where you insert the printer server name.
- For Token Ring: Load Route gbr and Load Route mbr for 4.x NetWare servers. This is to get packets through bridges.
- To return to default print server name in the printer, overtype with *IBMxxxxx*, where *xxxxx* are the last 5 digits of the printer serial number on the printer serial number name tag.

## Configuration for NetWare

The basic configuration in the NetWare environment is done using the PCONSOLE software supplied by Novell. There are two steps:

1. Add a Print Server.
2. Assign the Print Server to a Print Queue.

The configuration procedure described in this section is simple and straight-forward, best suited to configuring a relatively small number of print queues. If you intend to use a large number of queues on several file servers, consider using the Advanced Configuration described later.

**Before you begin:**

- Obtain Supervisor privileges on the system.
- Obtain the print server name. If you choose to accept the default, it will be IBMXXXXX, where XXXXX are the last five digits of the printer serial number.
- Obtain the concurrence of the network manager for any network configuration.
- The procedures described in this section apply to Novell NetWare 3.11. If you use 4.0 or later, you must set up your file server for bindery emulation by specifying the Bindery Context parameter. See your Novell documentation for details.

## Add a Print Server

Follow these steps to add a print server to your NetWare environment:

1. Log in to a file server from a client workstation.
2. Start PCONSOLE.
3. Select PRINT SERVER INFORMATION.
4. Press Insert to add a new Print Server.
5. Enter the Print Server Name: *IBMXXXXX* <Enter>, where *XXXXX* are the last five digits of the printer serial number.
6. Select the Print Server name just added; press enter.
7. Select PRINT SERVER CONFIGURATION.
8. Select PRINTER CONFIGURATION.

   Select 0 (you must use slot zero).
   NAME: Select any name you want, or accept the default.
   TYPE: REMOTE/OTHER
   Press the Esc key.
   Save your changes by selecting YES.
9. Press Esc to return to the Main Menu.
10. Repeat this procedure for each file server using the printer. Each file server under FILE SERVERS TO BE SERVICED must list the other file servers.

**Note:** You may change the default name at the printer console (under ATTACHMENTS/APPLICATION SETUP/NETWARE/CONFIGURATION/PRINT SERVER NAME). This must be done before you run PCONSOLE.

## Assign a Print Server to a Print Queue

The next step is assigning the print server to a print queue:

1. From the PCONSOLE Main Menu, select PRINT QUEUE INFORMATION (or skip to step 4 if you do not need to add a new queue).
2. Press Insert to add a new queue.
3. Type a queue name, and press Enter.
4. Select the queue that you want the printer to service.
5. Select QUEUE SERVERS in the PRINT QUEUE INFORMATION menu.
6. Press Insert to display the QUEUE SERVER CANDIDATES.
7. Select IBM XXXXX.
8. Press Esc repeatedly to return to the main menu.
9. Select PRINT SERVER INFORMATION.
10. Select IBM XXXXX.
11. Select PRINT SERVER CONFIGURATION.
12. Select QUEUES SERVICED BY PRINTER.
13. Select Printer 0.
14. Press Insert to show the available queues.
15. Select the queue name you added previously.
16. Take the default priority of 1.
17. Press Esc repeatedly to return to the main menu.

Repeat this procedure for every queue which you want the printer to service. The printer will scan up to 100 file servers and will use the first 16 that have this print server name.

The configuration is now completed. Enable (or Disable and Re-enable) NetWare at the printer. This is under ATTACHMENTS/APPLICATION SETUP/NETWARE. During enabling, the printer automatically finds out which file servers and queues it is assigned to service. This can take some time, depending on the number of file servers on the network.

## Verify the Communication

To verify communication by making a test printout, send a job to one of the print queues that the printer will service. Use CAPTURE, NPRINT, or PCONSOLE.

**Example:**

Use CAPTURE from the DOS command line when you are logged into the network, to print out the *autoexec.bat* file from the root of drive C:

**Example**

```
CAPTURE /L=1 /Q=QNAME /NOTIFY /TI=30 /NT /NFF /NB
COPY C: \AUTOEXEC.BAT LPT1:
```

The CAPTURE switches have the following meanings:

- /L=1 captures the printouts sent to the PC LPT1 port.
- /Q=QNAME specifies the print queue. (Replace QNAME with the name of the queue you defined.)
- /NOTIFY enables user messages.
- /TI=30 sets the time-out to 30 seconds.
- /NT specifies no tab expansion.
- /NFF ends the printout without a Form Feed.
- /NB disables the banner page.

**You have completed the basic configuration, and the printer is ready to use as a print server.**

## Advanced Configuration

The configuration method described here is more flexible, but more complicated. If, after reading this, you have doubts about which method to choose, you should choose the basic method described in a previous section.

1. Log in as supervisor to the NetWare server.
2. Start PCONSOLE.
3. Select CHANGE CURRENT FILE SERVER to specify where queue and printer configurations should be stored. Record the name of this file server for later use.
4. Select PRINT SERVER INFORMATION and add the new print server.
5. Select the new print server. The PRINT SERVER INFORMATION menu appears.
6. Select PRINT SERVER CONFIGURATION, and then FILE SERVERS TO BE SERVICED. Add all NetWare servers you want the printer to log into. The file server you are logged into always appears first in this list and cannot be deleted.
7. From the PRINT SERVER CONFIGURATION menu, select PRINTER CONFIGURATION. A list of 16 printers, all marked NOT INSTALLED appears.
   a. Select PRINTER 0. The Printer 0 menu appears. (You must use slot 0.)
   b. Enter a printer name in the NAME field. (This name is ignored by the printer.)
   c. Press Return at the TYPE field to see the valid options. Select REMOTE/OTHER.
   d. Press the Esc key and save your changes.
8. Return to the main menu and select PRINT QUEUE INFORMATION.
9. Press Insert to add a new queue. Type a queue name and press Enter.
10. Select the queue that you want the printer to service.
11. Select QUEUE SERVERS in the PRINT QUEUE INFORMATION menu.
12. Press Insert to display the QUEUE SERVER candidates.
13. Select the print server you previously added.
14. Press the Esc key repeatedly to return to the main menu.
15. Select PRINT SERVER INFORMATION.
16. Select the print server you previously added.
17. Select PRINT SERVER CONFIGURATION.
18. Select QUEUES SERVICED BY PRINTER. A list of installed printers appears.

19. Select PRINTER 0 and press the Insert key to show the available queues. Then assign one or more queues. The first queue would be the one just created. You can take the default priority of 1 for each queue.
20. Press the Esc key repeatedly to exit PCONSOLE.
21. At the 3130 under ATTACHMENTS/APPLICATION SETUP/NETWARE/CONFIGURATION/ADVANCED CONFIGURATION/FILE SERVER NAME, enter the file server name from above that was first in the list. Disable and re-enable NetWare.

# 370 Parallel Channel Attachment

# Chapter 27. MVS Printer Definitions

## Important -- Read This First

Before the customer engineer installs the Parallel channel attachment, you need to do the following:

- Complete the worksheet (Table 54 on page 324). The worksheet helps you gather all the information you need **before** your printer can be installed.
- Update the printer definitions. See “MVS Printer Definitions” on page 325.
- Update the PSF Startup procedure. See “PSF Procedure” on page 326.
- Define the printer to the host. See “Defining Channel-Attached Printers to MVS” on page 328.
- If you are running MVS as a second level guest under VM, the channel-attached printer must be defined to VM. See Chapter 29, “VM Printer Definitions” on page 335.

## MVS Parallel Channel Attachment Worksheet

*Table 54. MVS Parallel Channel Attachment Worksheet*

| Attachment Parameters | | Available Values | Value to Use |
|---|---|---|---|
| Parallel Link A Installed | | Yes or No | **Yes** |
| Device Address | | 00 to FF | |
| Data Transfer Protocol | | Interlocked or Data Streaming | |
| Data Streaming Rate | | 1.9, 2.7, 3.4, or 4.5 Mb/sec | |

| Printer Attachment Parameter | Notes |
|---|---|
| **Data Transfer Protocol:** | Determines if the more reliable Interlocked Transfer is used or the faster data streaming transfer is used.<br><br>The default is interlocked.<br><br>**Attention** For your first test print, start with Interlock, because some host and channel extenders do not support data streaming. |
| **Data Streaming Rate** | If Data Streaming is selected, this field sets the speed of transfer.<br><br>The default is 2.7 Mbytes/sec.<br><br>**Attention** For your first print using data streaming, select 2.7 Mbytes/sec, because some hosts and channel extenders do not support over 3 Mbytes/sec.<br><br>**Attention** Unexpected errors may occur if the printer is configured for a data streaming rate higher than the channel or IOCP. To resolve this problem, set the data streaming rate to a value lower than that allowed by the channel or IOCP. If this does not fix the problem, set the Data Transfer protocol to Interlocked. |

# MVS Printer Definitions

## JES2 Printer Definitions

Figure 96 shows the JES2 printer definition initialization member, located in the system parmlib.

```
*
FSSDEF FSSNAME=FSS3935,PROC=WRT3935,HASPFSSM=HASPFSSM
*
PRT3935   CLASS=A,SEP,NOMARK,DRAIN,MODE=FSS,FSS=FSS3935,              X
 PRMODE=(LINE,PAGE),UCS=0,UNIT=35C
```

*Figure 96. PSF/MVS JES2 Printer Definition for Parallel Channel Connection*

| Field | Notes |
|---|---|
| **PROC** | The value you specify on the PROC parameter must match the name on the PSF/MVS Startup Procedure. |

## JES3 Printer Definitions

Figure 97 shows an example of a JES3 printer definition. This example is NOT executable, but it is intended to help the JES3 system programmer define the printer to the MVS host.

```
* JES3 DEFINITION FOR 3935
*
FSSDEF,FSSNAME=FSS3935,TYPE=WTR,FSSNAME=FSS3935,PNAME=WRT3935
*
DEVICE,DTYPE=PRTAFP1,JNAME=PRT3935,FSSNAME=FSS3935,
JUNIT=(35C,SYS1,UR,ON),XTYPE=(PRT3935,UR),XUNIT=(35C,SYS1,UR,OFF)
MODE=FSS,PM=(LINE,PAGE),HEADER=JOB,
CARRIAGE=(YES,STDL),CHARS=(YES,GT10),DYNAMIC=YES,BURST=YES
```

*Figure 97. PSF/MVS JES3 Printer Definition for Parallel Channel Connection*

| Field | Notes |
|---|---|
| **PNAME** | The value you specify on the PNAME parameter must match the name on CNTL statement in the PSF/MVS Startup Procedure. |
| **JNAME** | The value you specify on the JNAME parameter specifies the name of the printer FSA. Each printer FSA should have a unique JNAME. The value you specify must match the label on the CNTL, PRINTDEV, and ENDCTL statements in the PSF/MVS startup procedure. |
| **SYSTEM, JUNIT** | The network value you specify on the JUNIT parameter (SYS1 in the example must specify the name of the processor the device is attached to. |

## PSF Procedure

```
For a Channel-Attached Printer:
//WRT3935 PROC
//* THE FOLLOWING STARTUP PROCEDURE DEFINES THE JCL AND PRINTDEV
//* STATEMENTS FOR PRT1, A CHANNEL-ATTACHED PRINTER.
//*
//STEP01    EXEC  PGM=APSPPIEP,REGION=4096K
//STEPLIB   DD  DSN=PSF.LINKLIB,DISP=SHR
//JOBHDR    OUTPUT PAGEDEF=V06483,           /* JOB HEADER PAGE        */
//          FORMDEF=A10120,CHARS=GT12        /* FORMDEF: ALTERNATE BIN */
//JOBTLR    OUTPUT PAGEDEF=V06483,           /* JOB TRAILER PAGE       */
//          FORMDEF=A10110,CHARS=GT12        /* FORMDEF: MAIN BIN      */
//DSHDR     OUTPUT PAGEDEF=V06483,           /* DATA SET SEPARATOR     */
//          FORMDEF=A10110,CHARS=GT12        /* FORMDEF: MAIN BIN      */
//MSGDS     OUTPUT PAGEDEF=A08682,           /* MESSAGE DATASET        */
//          FORMDEF=A10110,CHARS=GT15        /*                        */
//*
//*
//FONT01   DD   DSN=SYS1.FONT300,DISP=SHR  /* For 300-pel resolution */
//         DD   DSN=SYS1.FONTLIBB,DISP=SHR
//*FONT01   DD   DSN=SYS1.FONT240,DISP=SHR /* For 240-pel resolution */
//*         DD   DSN=SYS1.FONTLIBB,DISP=SHR
//PSEG01   DD   DSN=SYS1.PSEGLIB,DISP=SHR
//OLAY01   DD   DSN=SYS1.OVERLIB,DISP=SHR
//PDEF01   DD   DSN=SYS1.PDEFLIB,DISP=SHR
//FDEF01   DD   DSN=SYS1.FDEFLIB,DISP=SHR
//*
//*
//PRT3935   CNTL
//PRT3935   PRINTDEV FONTDD=*.FONT01,     /* FONT LIBRARY DD             */
//           OVLYDD=*.OLAY01,             /* OVERLAY LIBRARY DD           */
//           PSEGDD=*.PSEG01,             /* SEGMENT LIBRARY DD           */
//           PDEFDD=*.PDEF01,             /* PAGEDEF LIBRARY DD           */
//           FDEFDD=*.FDEF01,             /* FORMDEF LIBRARY DD           */
//           JOBHDR=*.JOBHDR,             /* JOB HEADER SEPARATOR OUTPUT  */
//           JOBTRLR=*.JOBTLR,            /* JOB TRAILER SEPARATOR OUTPUT */
//           DSHDR=*.DSHDR,               /* DATA SET HEADER SEPARATOR    */
//           MESSAGE=*.MSGDS,             /* MESSAGE DATA SET OUTPUT      */
//           BUFNO=5,                     /* NUMBER OF WRITE DATA BUFFERS */
//           PAGEDEF=A08682,              /* DEVICE PAGEDEF DEFAULT       */
//           FORMDEF=A10110,              /* DEVICE FORMDEF DEFAULT       */
//           CHARS=GT12,                  /* DEFAULT FONT                 */
//           PIMSG=(YES,16),              /* ACCUMULATE DATA SET MESSAGES */
//           DATACK=BLKCHAR,              /* UNBLOCK DATA CHECKS          */
//           TRACE=NO,                    /* BUILD INTERNAL TRACE         */
//           SETUP=FORMS                  /* SETUP MESSAGE                */
//*  DEFAULT PAGEDEF AND CHARS ARE SPECIFIED BY JES3                      */
//*          PAGEDEF=A868                 /* COPY OF A08682               */
//*          CHARS=GT12                   /* DEFAULT FONT                 */
//PRT3935    ENDCNTL
```

*Figure 98. Sample PSF Startup*

| Field | Notes |
|---|---|
| **PROC name** | The procedure name (WRT3935 in the example) must match one of the following:<br>• The name on the PROC parameter of the FSSDEF statement in the JES2 printer definition.<br>• The name on the PNAME parameter of the DEVICE statement in the JES3 printer definition. |
| **CNTL name** | The label on the CNTL statement (PRT3935 in the example) must match:<br>• The label on the ENDCNTL and PRINTDEV statements.<br>• The name on the JNAME parameter on the JES3 DEVICE statement.<br>• The printer name on the JES2 PRT *nnnn* initialization statement. |
| **DATACK** | **BLKCHAR** is the recommended value for the DATACK parameter. |

## Defining Channel-Attached Printers to MVS

To define host-connected, channel-attached printers, do one of the following:

- If you are using a version prior to MVS 4.1.0, use MVSCP to specify the device. See "Defining Printers with MVSCP."

  **Note:** Use MVSCP to define the I/O configuration rather than SYSGEN or IOGEN. MVSCP accepts the same IODEVICE statements as the SYSGEN or IOGEN process.

- If you are using MVS 4.1.0 or above, use HCD to specify the device. See "Defining Channel-Attached Printers with HCD."

## Defining Printers with MVSCP

This configuration definition consists of CNTLUNIT and IODEVICE statements for channel-attached printers using a version prior to MVS 4.1.0. PSF/MVS 2.1.0 or later supports the generic device type ″AFP1″ for the printers, which is specified on the UNIT keyword, similar to the generic device type of ″3800″ that is specified for 3800 printers. To define a printer to run with a version prior to MVS 4.1.0, use the following example as a model:

```
CNTLUNIT CUNUMBR=35C,        Channel 3 device 92
         PATH=03,            Specifying channel path
         PROTOCL=D or S,     S is recommended
         SHARED=N,
         UNIT=AFP1,
         UNITADD=((5C,1))

IODEVICE ADDRESS=35C,
         CUNUMBR=35C,        Same as CUNUMBR on CNTLUNIT
         MODEL=0,            This is optional
         TIMEOUT=Y,
         UNIT=AFP1
```

*Figure 99. Sample JCL for Defining a Host-Connected Channel-Attached Printer. Use this sample for all MVS levels that support MVSCP.*

**Note:** The printer must be configured to match the protocol specified on the PROTOCL parameter.

Refer to the latest version of the *MVS Configuration Program Guide and Reference* for details on performing I/O configuration definition.

## Defining Channel-Attached Printers with HCD

MVS 4.1.0 supports HCD without dynamic reconfiguration management (DRM) capabilities. MVS 4.2.0 and all prerequisites must be installed if you want HCD with DRM capabilities. After HCD is installed, use Interactive System Productivity Facility (ISPF) to access it. HCD is menu-driven and has online help-screens. Figure 5 is an example of an ISPF menu with HCD installed.

```
0   ISPF PARMS   - Specify terminal and user parameters
1   BROWSE       - Display source data or output listings
2   EDIT         - Create or change source data
3   UTILITIES    - Perform utility functions
4   FOREGROUND   - Invoke language processors in foreground
5   BATCH        - Submit job for language processing
6   COMMAND      - Enter TSO Command, CLIST, or REXX exec
7   DIALOG TEST  - Perform dialog testing
8   LM UTILITIES - Perform library administrator utility functions
9   IBM PRODUCTS - Additional IBM program development products
10  SCLM         - Software Configuration and Library Manager
HC  HCD          - Hardware Configuration Definition
R   RACF 2.1     - RACF
S   SDSF         - System Display and Search Facility (JES2 Only)
T   TUTORIAL     - Display information about ISPF/PDF
X   EXIT         - Terminate ISPF using log and list defaults

Enter END command to terminate ISPF.
5665-402 (C) COPYRIGHT IBM CORP 1980, 1989
```

*Figure 100. Interactive System Productivity Facility Primary Option Menu.. Use this sample if your version is MVS 4.1.0 and above, with HCD installed.*

If you choose the HCD option, the main menu for HCD will be displayed (Figure 101).

```
              Define Device Parameters/Features

Specify or revise the values below.

Configuration ID . : CONFIG1
Device number  . . : 035C              Number of devices :   1
Device type  . . . : 3935

Parameter/   Value      P Req. Description
Feature
OFFLINE      No                Device considered online or offline at IPL
DYNAMIC      Yes               Device supports dynamic configuration
BURSTER      No                Burster-Trimmer-Stacker
```

*Figure 101. HCD Define Device Parameters/Features Screen*

For Device Type, specify AFP1 or the device type (for example, 3935). Notice that DYNAMIC the DYNAMIC option will display only if MVS 4.2.0 or above is being used.

For more information about how to use HCD, refer to the HCD user's guide, *Hardware Configuration Definition: Using the Dialog*.

# Chapter 28. VSE Printer Definitions

## Important -- Read This First

Before the customer engineer installs the Parallel channel attachment, you need to do the following:

- Complete the worksheet (Table 55 on page 332). The worksheet helps you gather all the information you need **before** your printer can be installed.
- Add the IPL ADD statement(s) to the IPL Deck. See “Channel-Attached Printers” on page 333.
- Define the printer with the IOCP. See “Defining Printers with the IOCP” on page 333.
- Update the PSF startup procedure. See “Sample PSF Job to Start Two Page Printers” on page 334.
- If you are running VSE as a second level guest under VM, the channel-attached printer must be defined to VM. See Chapter 29, “VM Printer Definitions” on page 335.

## VSE Parallel Channel Attachment Worksheet

*Table 55. VSE Parallel Channel Attachment Worksheet*

| Attachment Parameters | | Available Values | Value to Use |
|---|---|---|---|
| Parallel Link A Installed | | Yes or No | **Yes** |
| Device Address | | 00 to FF | |
| Data Transfer Protocol | | Interlocked or Data Streaming | |
| Data Streaming Rate | | 1.9, 2.7, 3.4, or 4.5 Mb/sec | |

| Printer Attachment Parameter | Notes |
|---|---|
| **Data Transfer Protocol:** | Determines if the more reliable Interlocked Transfer is used or the faster data streaming transfer is used.<br><br>The default is interlocked.<br><br>**Note:** For your first test print, start with Interlock, because some host and channel extenders do not support data streaming. |
| **Data Streaming Rate** | If Data Streaming is selected, this field sets the speed of transfer.<br><br>The default is 2.7 Mbytes/sec.<br><br>**Note:** For your first print using data streaming, select 2.7 Mbytes/sec, because some hosts and channel extenders do not support over 3 Mbytes/sec.<br><br>**Attention** Unexpected errors may occur if the printer is configured for a data streaming rate higher than the channel or IOCP. To resolve this problem, set the data streaming rate to a value lower than that allowed by the channel or IOCP. If this does not fix the problem, set the Data Transfer protocol to Interlocked. |

## Channel-Attached Printers

Channel-attached printers are uniquely supported in VSE/AF as a device type AFP (Advanced Function Printing). The basic device support consists of an IPL ADD statement.

The IPL ADD statements that define channel-attached printers must be included in the IPL ADD deck. The following example shows the ADD statement:

```
ADD 35C,AFP
```

where *35C* is the device address of the printer.

## Defining Printers with the IOCP

The following sections tell how to define printers with the I/O Configuration Program (IOCP). The IOCP batch program is on the VSE/ESA distribution tape 3 or the tape cartridge. VSE/ESA 1.2 provides two skeletons in VSE/ICCF library 59 to assist with IOCP installation and configuration:

```
SKIOCPIN - IOCP Sample Batch Installation Job
SKIOCPCN - IOCP Sample Configuration
```

For information on performing I/O configuration definition, refer to *ES/9000 ES/3090 Input/Output Configuration Program User Guide*, GC38-0097. For specific information on the 9221, refer to *ES/9000 Models 120, 130, 150, 170 - 9221 Stand-Alone Input/Output Configuration Program User's Guide*, SA24-4348.

### Defining Printers with IOCP

Figure 102 contains CNTLUNIT and IODEVICE statements for defining channel-attached printers. PSF/VSE 2.2 supports the generic device type ″AFP″ for the Group3 printers, where the IOCP documentation shows ″AFP1″ is specified on the UNIT keyword. The UNIT keyword is for documentation purposes only; therefore UNIT can be specified as ″AFP″ or ″AFP1.″

```
CNTLUNIT CUNUMBR=35C,
         PATH=03,          Specifying channel path
         PROTOCL=D or S,   S is recommended
         SHARED=N,
         UNIT=AFP1,
         UNITADD=((5C,1))

IODEVICE ADDRESS=35C,      Same as IPL ADD statement address
         CUNUMBR=35C,      Same as CUNUMBR on CNTLUNIT
         MODEL=0,          Optional keyword
         TIMEOUT=Y,
         UNIT=AFP1
```

*Figure 102. Example JCL for Defining a Host-Connected Channel-Attached Printer*

**Notes:**

1. The VSE ADD statement is ADD cuu,AFP.
2. The parallel attachment configuration must match the protocol specified on the PROTOCL statement.

## Sample PSF Job to Start Two Page Printers

Figure 103 on page 334 shows a sample job that can start PSF.

```
$$   JOB     JNM=PSF,CLASS=4,DISP=K
//   JOB     PSF
//   DLBL    PRD2,'VSE.PRD2.LIBRARY'
//   EXTENT  ,volser
//   DLBL    user,'VSE.user.LIBRARY'
//   EXTENT  ,volser
//   LIBDEF  PHASE,SEARCH=(user.PARMLIB,PRD2.AFP)
//   ASSGN   SYSLST,xxx
//   EXEC    APTBMIEP,SIZE=APTBMIEP
PRT3935      PRINTDEV   BUFNO=5,
                        CHARS=GT10,
                        CKPTPAGE=100,
                        DATACK=BLKCHAR,
                        FORMDEF=A10110
                        MESSAGE=(V04863,A10110),
                        MRKFRM=YES,
                        NPRO=300,
                        PAGEDEF=V04863,
                        PIMSG=NO,
                        SEPPAGE=(V04863,A10110),
                        SPBUFFER=8,
                        UNIT=35C
/*
/&
..
* $$    EOJ
```

*Figure 103. Sample PSF Job to Start PSF*

# Chapter 29. VM Printer Definitions

## Important -- Read This First

Before the customer engineer installs the Parallel channel attachment, you need to do the following:

- Complete the worksheet (Table 56 on page 336). The worksheet helps you gather all the information you need **before** your printer can be installed.
- Define the printer to the host. See “Defining Channel-Attached Group3 Printers to CP” on page 337.
- If necessary, define the printer with an IOCP. See “Channel-Attached Group3 IOCP” on page 337.

## VM Parallel Channel Attachment Worksheet

*Table 56. VM Parallel Channel Attachment Worksheet*

| Attachment Parameters | | Available Values | Value to Use |
|---|---|---|---|
| Parallel Link A Installed | | Yes or No | **Yes** |
| Device Address | | 00 to FF | |
| Data Transfer Protocol | | Interlocked or Data Streaming | |
| Data Streaming Rate | | 1.9, 2.7, 3.4, or 4.5 Mb/sec | |

| Printer Attachment Parameter | Notes |
|---|---|
| **Data Transfer Protocol:** | Determines if the more reliable Interlocked Transfer is used or the faster data streaming transfer is used.<br><br>The default is interlocked.<br><br>**Note:** For your first test print, start with Interlock, because some host and channel extenders do not support data streaming. |
| **Data Streaming Rate** | If Data Streaming is selected, this field sets the speed of transfer.<br><br>The default is 2.7 Mbytes/sec.<br><br>**Note:** For your first print using data streaming, select 2.7 Mbytes/sec, because some hosts and channel extenders do not support over 3 Mbytes/sec.<br><br>**Attention** Unexpected errors may occur if the printer is configured for a data streaming rate higher than the channel or IOCP. To resolve this problem, set the data streaming rate to a value lower than that allowed by the channel or IOCP. If this does not fix the problem, set the Data Transfer protocol to Interlocked. |

## Group3 PDM Installation and Verification

This section describes the Group3 PDM attachment definition, how to define a Group3 printer to CP, Group3 installation, verification, and options PDM file. For more information, refer to the *PSF/VM: System Programming Guide,* S544-3680-00, and the *FSF/VM: Program Directory,* G544-3683-01.

## Defining Channel-Attached Group3 Printers to CP

The System Programmer must define the Group3 printers and the printer control unit to the VM control program (CP).

## Group3 RDEVICE and RCTLUNIT Examples (DMKRIO)

The RDEVICE and RCTLUNIT macros are used to define the channel-attached G printers to CP.

- VM/ESA-370 Feature

  ```
  RDEVICE ADDRESS=490, DEVTYPE=AFP1
  RCTLUNIT ADDRESS=490, CUTYPE=AFP1
  ```

- VM/ESA

  ```
  RDEVICE DEVNO=0490, DEVTYPE=AFP1
  ```

  In VM/ESA an RCTLUNIT statement is not needed.

For better performance, Group3 printers should be located on a different real channel than the PSFMAINT minidisks and the SFCM A-disk.

The printer must be attached to its corresponding VM virtual machine. Virtual and real device address equivalence is not required.

Specifying DEVTYPE=AFP1 is recommended for VM/SP systems that do not recognize the specific Group3 printers. When the DMKRIO table is assembled, the following message will appear, after the RDEVICE statement:

```
IF0197 MNOTE   4,UNSUPPORTED DEVICE TYPE
```

This is expected. PSF/VM supports the device, not VM. Refer to *VM/SP Planning Guide and Reference, VM/SP HPO Planning Guide and Reference,* or *VM/XA SP Planning and Administration* for more information.

## Channel-Attached Group3 IOCP

For those processors requiring an IOCP, the following definitions are required for Group3 printers:

```
CU390    CNTLUNIT CUNUMBR=390, PATH=03),PROTOCL=S, SHARED=N,
             UNITADD=((90,8)),UNIT=AFP1
DEV390   IODEVICE ADDRESS=(390,8),CUNUMBR=390,
             UNIT=AFP1
```

## VM Channel Attachment Sample

Figure 104 on page 338 shows a sample options PDM file.

```
*******************************************
*
*SAMPLE OPTIONS PDM FILE FOR A GROUP3 PRINTER
*
*FOR MORE INFORMATION, PLEASE SEE:
* S544-3680 PSF/VM SYSTEM PROGRAMMING GUIDE
*
*******************************************
*IDENTIFY PRTID OF GROUP3
PRTID PR3130
*PDM WILL ISSUE A SETUP MESSAGE FOR FORM LOADING
AUTO
*CAN ANY USER ISSUE ALL PDM SUPPORTED QUERY COMMANDS?
ALLQUERY NO
*PRINTER VIRTUAL ADDRESS (1-4 CHARACTER VIRTUAL ADDRESS)
ADDR 1FF
*INITIAL CLASS TO PROCESS
CLASS B
*FILE FINISHED PROCESSING APRXXX4371 MESSAGE ISSUED?
COMPMSG YES
*MAXIMUM NUMBER OF FILES AWAITING PDM PROCESSING
CONVERT 6
*DESTINATION ID
DEST PR3130
*FONT TO USE FOR LINE DATA
DFLTFONT GT10
*TRIM THE FONT DATA SENT TO THE PRINTER
FONTPRUNE SBYTE
*NAME OF FORM TO USE ON THE GROUP3
FORM STANDARD
*HEADER PAGE FORMDEF (CUT SHEET)
HEADFDEF F1A10110 FDEF38PP
*HEADER PAGE FORMDEF (CONTINUOUS FORMS)
*HEADFDEF F1C10110 FDEF38PP
*HEADER PAGE PAGEDEF (CUT SHEET)
HEADPDEF P1SCS PDEF38PP
*HEADER PAGE PAGEDEF (CONTINUOUS FORMS)
*HEADPDEF P1SCF PDEF38PP
*ACTIVATE INTERNAL GROUP3 PDM TRACE (ON) DURING INSTALLATION.
*MAY IMPACT PERFORMANCE IF ROUTINELY LEFT ON
ITRACE OFF
*PDM A-DISK
PDMDISK 191
*WAIT 12 MINUTES FOR MISSING INTERRUPT
MITIME 720
*WAIT 30 SECONDS BEFORE DOING CONTINUOUS FORMS NPRO
NPRO 30
*SFCMID AND SFCM A-DISK
SFCM SFCM1 193
*USERID AND NODEID OF SYSTEM DIAGNOSTICIAN
*(THE PERSON WHO SHOULD RECEIVE NOTIFICATION WHEN
*SEVERE ERROR CONDITIONS OCCUR IN THE PDM)
SYSDIAG MAINT
*TRAILER PAGE FORMDEF (CUT SHEET)
TAILFDEF F1A10110 FDEF38PP
*TRAILER PAGE FORMDEF (CONTINUOUS FORMS)
*TRAILFDEF F1C10110 FDEF38PP
*TRAILER PAGE PAGEDEF (CUT SHEET)
TRAILPDEF P1SCS PDEF38PP
*TRAILER PAGE PAGEDEF (CONTINUOUS FORMS)
*TRAILPDEF P1SCF PDEF38PP
```

*Figure 104. Sample Options PDM File*

# Appendix A - Configuring a Printer

# Appendix A. Configuring a Printer

Chose whichever of the following paragraphs is appropriate when you configure your printer.

## Configuring for IPDS

When you configure a 3130, Release 2, for IPDS data stream, follow the steps below:

1. On the first page of the Menu Tree, under Attachments, select the hardware type you will be using, for example, TOKEN RING. Note that there is a choice under ATTACHMENTS titled APPLICATION SETUP. You have to configure this application setup before IPDS will work.
2. Go to your attachment page, for example, TOKEN RING, and configure it using the attachment work sheet you filled out. Set AUTO START to yes if you want the token ring card to enable when the machine is powered up.
3. Now return to ATTACHMENTS and go to APPLICATION SETUP. Select IPDS. If you get the following error message, FUNCTION UNAVAILABLE ENABLE IPDS, go to SETUP, MACHINE CONFIGURATION, DATA STREAMS and enable IPDS, then perform this step again. If you do not get this message, proceed to the next step.
4. Select CONFIGURATION, then select SOURCE ATTACHMENT. From the list, select the source that IPDS will come from, for example, SNA TOKEN RING.
5. Return to the attachment you will be using, for example, TOKEN RING, and go to ENABLE STATUS and set to enable.
6. Go back to APPLICATION SETUP, then to IPDS, and set ENABLE STATUS to ENABLE. Then scroll to CONFIGURATION, then to IPDS AUTO START, and select YES, unless you do not want IPDS to auto start when the machine is powered up.
7. Once you exit from the menu and make the machine ready, it should be ready to receive and print an IPDS job.
8. Additional items can be configured for IPDS, for example, SETUP, MACHINE CONFIGURATION, DATA STREAMS, and IPDS. However, you can do this later.

## Configuring for LAN

When you configure the 3130 for PCL or Post Script data stream, follow the steps below:

1. If you will be using the parallel port for PCL or Post Script jobs, select ATTACHMENTS, PC PARALLEL, CONFIGURATION. Here, set AUTO START to yes if you want the parallel port to enable each time the printer is powered on.
2. Return to CONFIGURATION, then scroll to ENABLE STATUS, and then set to ENABLE. You must set ENABLE STATUS to ENABLE before the parallel port will work.
3. If PCL or POST SCRIPT is ordered, it must be installed. Call your IBM Service Representative to do this.
4. Additional items can be configured for Post Script and PCL under SETUP, MACHINE CONFIGURATION, DATA STREAMS, but you may do this later.
5. If you are using an NPS (network print server), install it at this time and run test prints from it. Refer to NPS documentation.

# Index

## Numerics



## A



## B



## C



## D



## E



## G

## T



## V



## W

# Readers′ Comments — We′d Like to Hear from You

**InfoPrint 60**
**3130, 3160 and 3935**
**Advanced Function Printer**
**Attachment Configuration Handbook**

**Publication No. S544-3977-04**

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Cut or Fold
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Fold and Tape | **Please do not staple** | Fold and Tape

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