

# PRINT/GATE

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*An SNA Print Gateway that routes output from 24 SNA  
3270 printer sessions to up to 24 Novell print queues*

*Documentation Edition 2  
Software Version 90 or later*

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# Preface

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Welcome to a cost-effective solution for high-speed printing from mainframe 3270 printer sessions to Novell print queues.

The PRINT/GATE product enables an IBM, PS/2, or compatible computer to direct output from up to 24 host 3270 printer sessions to as many as 24 Novell print queues.

This manual shows you step-by-step how to install the PRINT/GATE software and choose the proper settings for your configuration (Chapter 2).

You should be able to install and use the PRINT/GATE product by following the steps in this manual and the *BARR/3270* manual. However, please feel free to call Technical Support if you have any difficulties.

## **Barr Technical Support**

Contact Barr Technical Support at 800-BARR-SYS Monday through Friday between 9 a.m. and 8 p.m. eastern time if you have questions or problems with Barr hardware or software. Technical Support will ask for your adapter serial number and software version number. When you call, please have this information on hand.

If you contact Technical Support by fax, e-mail, or the Web site support page, please include the serial number and software version number in your correspondence.

You can obtain the adapter serial number from any of these places:

- Label on the adapter box
- Blue sticker on the adapter edge that is visible from the rear of the computer
- Back of the adapter, where it is handwritten

*Notes:*

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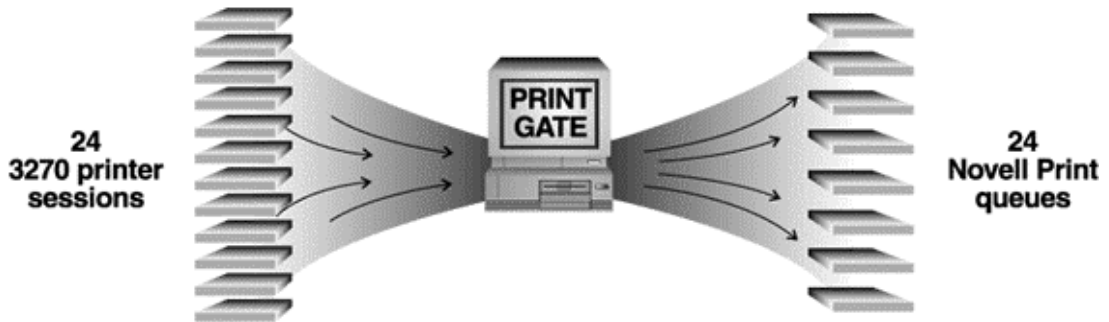
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*Notes:*

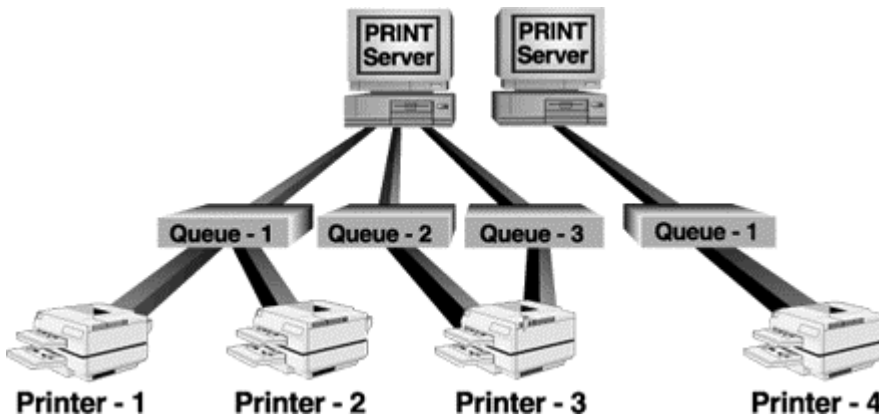
# 1. Introduction

---

PRINT/GATE is a computer-based product that allows you to direct print data from mainframe applications like CICS, IMS, and TSO to up to 24 Novell print queues. Up to 24 printer session LUs can be defined for PRINT/GATE. Most 3270 emulation packages support only a few printer sessions.



PRINT/GATE has all the features of the BARR/3270 product, plus it allows additional printer sessions and gives you the flexibility of accessing many network printers. You can direct your output to any LAN-based or server-based printer on the network. When printing to network printers, output from multiple queues can be sent to a shared printer, or different queues can write to different printers. The following diagram shows an example of assigning network queues to printers.

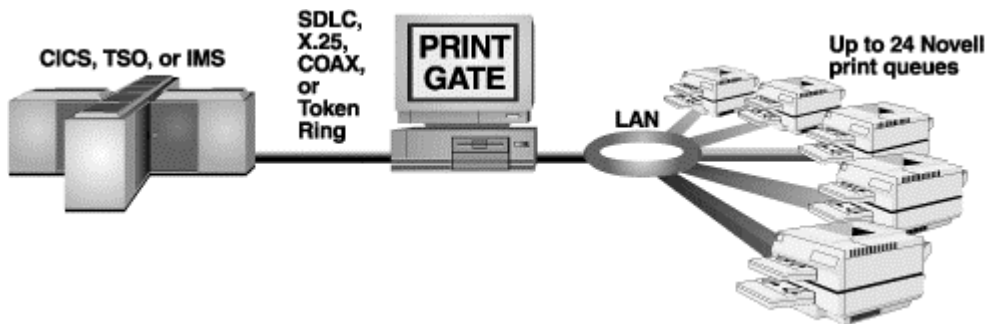


And it's fast. Printing with PRINT/GATE is four times faster than Novell captures.

With PRINT/GATE, you also are assured of a reliable connection for your printer sessions. In a typical SNA network, 3270 printer sessions are handled by computer workstations connected to a controller or gateway. Printers are connected to only a few of the user computers and are shared by many 3270 users on the network. Each printer requires its computer to be powered on, configured properly, and running the 3270 emulation software successfully. Since these users often reboot or change programs, 3270 users cannot rely on these printers.

With PRINT/GATE on a dedicated computer, your host printer sessions are no longer dependent upon a user's computer. You can print anywhere on the network without having to worry about another user's workstation.

The following diagram shows a sample SNA network configuration with PRINT/GATE.



## 1.1 Features

PRINT/GATE supports all of the features available with BARR/3270, plus more. The standard 3270 features (printer, display terminal, keyboard, file transfer, communications, and diagnostic features) are discussed in Chapter 2 of your *BARR/3270* manual.

The following additional features are supported by PRINT/GATE.

### Support for up to 24 Novell Print Queues

PRINT/GATE can support up to 24 Novell print queues. This is double the number of network print queues supported by BARR/3270. The print queues can be on up to 24 print servers. The Barr software dynamically manages connection to the servers, maintaining simultaneous connection to as many as eight, the maximum allowed by Novell. When a request is made to connect to another server, Barr disconnects from a server that it is not currently printing to and makes the new connection. However, the connection with the default server is always maintained.



## **Support for up to 24 Host LUs**

PRINT/GATE supports 20 more host LUs than 3270 emulation software, allowing you to maintain 24 host printer sessions to service all your mainframe printing needs.

## **Connection by Host or the BARR GATEWAY**

PRINT/GATE can be a standalone station, or it can be a workstation to the BARR GATEWAY. When attached by the BARR GATEWAY, up to 20 printer sessions and 24 Novell print queues are available.

## **Choice of SNA Protocols**

When used as a standalone station, PRINT/GATE can connect to the host by SDLC, X.25, Token Ring 802.2, or COAX/3299. PRINT/GATE can connect to the BARR GATEWAY using ASYNC, IPX, NetBIOS, Token Ring 802.2, or X.25 protocols.

## **Printer Session Status Screen**

The Barr software includes a printer session status screen that lets you monitor the status of the 3270 printer sessions. For each printer LU defined, this screen shows the LU number, LU name, status, application ID, number of lines received, and the destination for the printer output.

## **Local Sessions**

You can also define local 3270 terminal sessions and local printer sessions to PRINT/GATE. However, note that computers usually do not have enough memory to enable more than 24 total sessions, including any local sessions plus the sessions for the network printers.

# **1.2 Computers Supported**

PRINT/GATE is for use only with IBM AT, IBM PS/2 Micro Channel Architecture Models 50 and above, or compatible UL-listed computers that have installation instructions detailing user installation of card cage accessories.

## 1.3 Requirements

PRINT/GATE requires:

- One of the supported personal computers with at least 640K memory
- DOS version 3.0 or later
- Barr Communications hardware (RS232, V.35, X.21, Token Ring, or COAX for standalone; ASYNC or X.25 for workstation; Barr hardware not necessary for workstation IPX, NetBIOS, or Token Ring connections)

# 2. Software Installation

---

## Installation Steps

It is usually best to install any communications hardware first, then the software. Follow these steps when installing PRINT/GATE.

1. **Hardware Installation** – Install the Barr communications hardware, if any, that came with your package. Refer to the Barr communications adapter manual for instructions. For the Token Ring connection, no adapter manual is supplied. A Token Ring key is supplied, however, with the standalone software version. Simply plug the Token Ring key into a parallel (LPT) port on the computer.  
If the connection is by BARR GATEWAY, Barr communications hardware is supplied only with the X.25 connection.
2. **3270 Printer Session Parameters** – Define the 3270 printers. Refer to Section 2.3 of this manual.
3. **Devices and Printers** – Define the network print queues to the Barr software. Refer to Section 2.4 of this manual.
4. **Assign Devices** – Assign the output from the 3270 printer sessions to the network print queues. Refer to Section 2.5 of this manual.
5. **Complete the Software Installation** – Finish entering the remaining installation parameters, according to the instructions in Chapter 5 of the *BARR/3270* manual.
6. **Host Definition** – This manual lists the parameters you need to define PRINT/GATE to your host. The host definition is discussed in detail in Section 5.3 of the *BARR/3270* manual.

## 2.1 Load Software from Diskette

Follow these steps to install the software from the floppy disk provided.

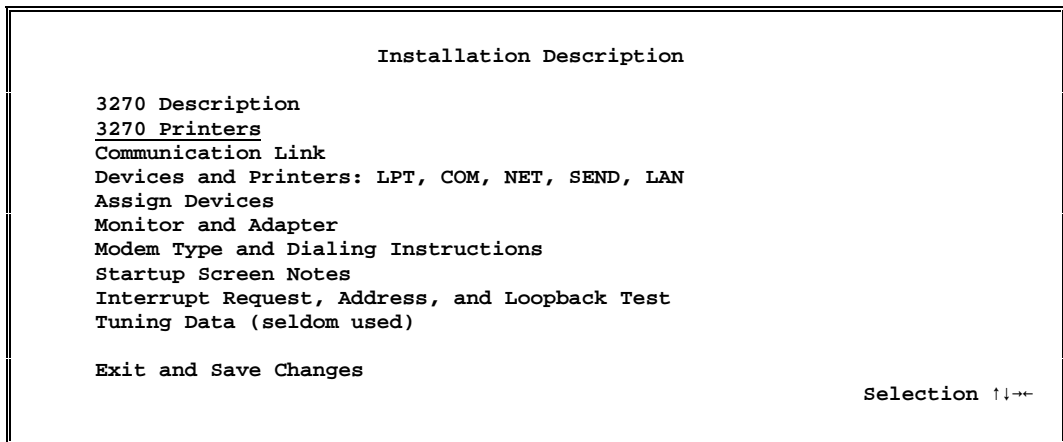
1. Insert the Barr software disk into drive A.
2. At the DOS prompt, type **A:install**.

```
c>A:install
```

3. Follow the on-screen instructions for loading the software into directories on your computer.
4. When the software is loaded, the **Installation Description** menu for the Barr software displays. Follow the instructions in the remaining sections of this chapter for entering the configuration parameters.

## 2.2 Installation Description

This chapter covers the PRINT/GATE parameters you specify during software installation to define 3270 printer sessions and direct output to Novell print queues. The *BARR/3270* manual discusses installation and operation of the 3270 features of the software provided.



The following **Installation Description** options are discussed in this manual:

- 3270 Printers
- Devices and Printers
- Assign Devices

The following remaining parameters are discussed in the *BARR/3270* manual:

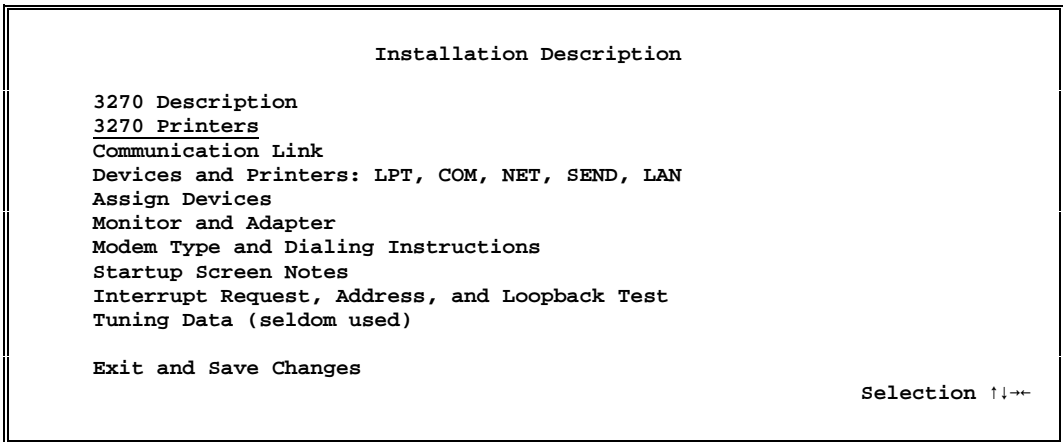
- 3270 Description
- Communication Link
- Monitor and Adapter
- Modem Type and Dialing Instructions
- Startup Screen Notes

- Interrupt Request, Address, and Loopback Test
- Tuning Data (seldom used)
- Exit and Save Changes

## 2.3 3270 Printers

First, define the number of 3270 printers to the Barr software.

- From the **Installation Description** menu, select **3270 Printers**.



- From the **3270 Printers** screen, define the number of 3270 printer LUs and the LU names.

3270 Printers			
Number of 3270 Printers: <u>24</u>			
LU	LUNAME	LU	LUNAME
03	LU1	15	LU13
04	LU2	16	LU14
05	LU3	17	LU15
06	LU4	18	LU16
07	LU5	19	LU17
08	LU6	20	LU18
09	LU7	21	LU19
10	LU8	22	LU20
11	LU9	23	LU21
12	LU10	24	LU22
13	LU11	25	LU23
14	LU12	26	LU24
Enter character			

The following options are specified.

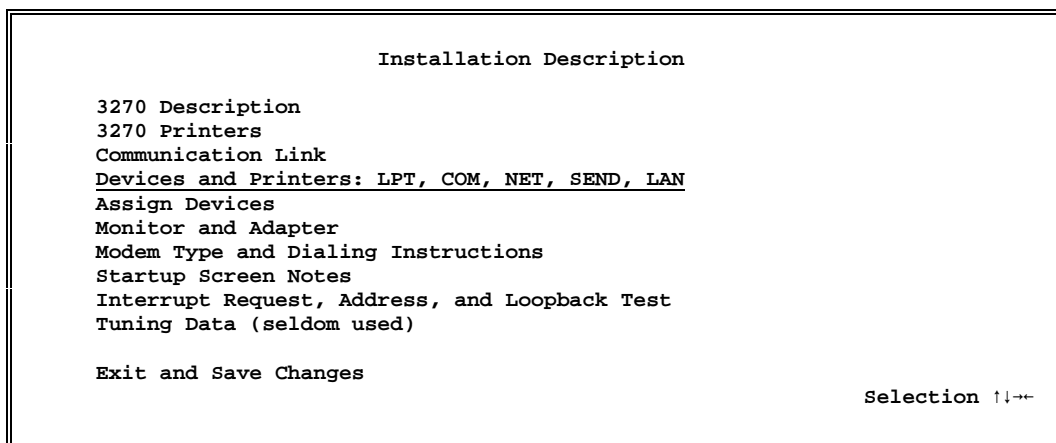
**TABLE 2-1**  
3270 Printers Screen

Option	Description
<b>Number of 3270 Printers</b>	From 1 to 24 3270 printers may be specified.
<b>LU</b>	The LU number is automatically assigned. The list of printer session LUs displays after you specify the desired number and press ENTER. (Typically, local 3270 terminal sessions and local 3270 printers are defined to the host first, beginning with LU 2, followed by the 3270 printer LUs for the network printers.)
<b>LUNAME</b>	Enter a unique 8-character name for each printer session LU. The default name is LUn, where n is the number of the LU. The name entered here must match the LU name in the host physical unit definition. It will also be the name of the source device that appears on the <b>Assign Devices</b> menu.

## 2.4 Devices and Printers

Next, define the network print queues to PRINT/GATE from the **Devices and Printers** menu. This information is also covered in Section 5.4 of the *BARR/3270* manual. It is repeated here for your convenience.

- From the **Installation Description** menu, select **Devices and Printers**.



The devices **NET1-12** and **NET13-24** are defined from the **Devices and Printers** screen. (**NET13-24** will not display if **Number of 3270 Printers** is 0.) Each NET device can be assigned its own printer control data in the Barr software, so different types of network printers can be used.

```

                                Devices and Printers

LPT1      Use      (Generic)
LPT2      Delete
LPT3      Delete
COM1      Delete
COM2      Delete
COM3      Delete
COM4      Delete
SEND1     Delete
SEND2     Delete
LAN1      Delete
LAN2      Delete
LAN3      Delete
LAN4      Delete

NET1      -12
NET13     -24

Escape

                                Selection ↑↓←→

```

- Select NET1-12. The NET Devices screen displays.

```

                                NET Devices

NET1      Delete
NET2      Delete
NET3      Delete
NET4      Delete
NET5      Delete
NET6      Delete
NET7      Delete
NET8      Delete
NET9      Delete
NET10     Delete
NET11     Delete
NET12     Delete

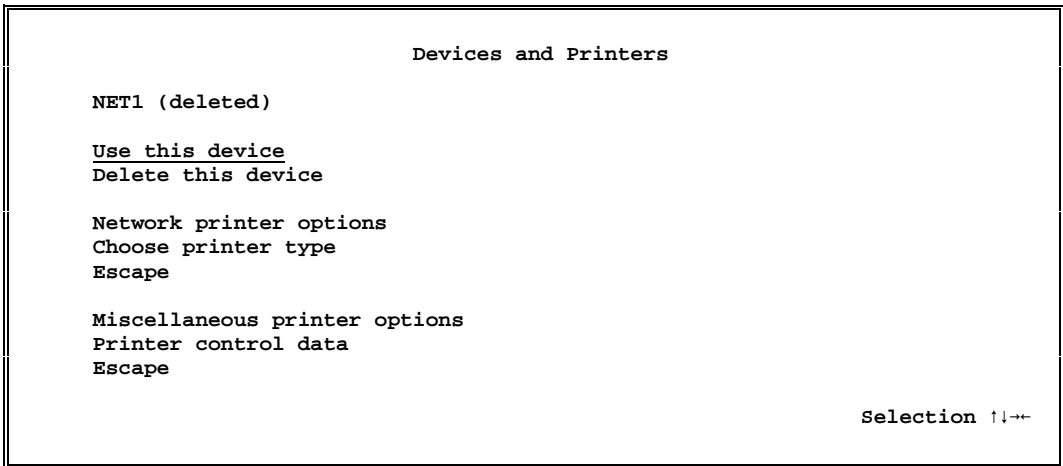
Escape

                                Selection ↑↓←→

```

- Select NET1.





From this screen, specify the following options.

**TABLE 2-2**  
Devices and Printers Screen

Option	Description
<b>Use this device</b>	This NET device may be used and will display as a destination device on the <b>Assign Devices</b> menu. The device is not enabled in the Barr software unless you select this option.
<b>Delete this device</b>	Default. The NET device will not be used and will not display on the <b>Assign Devices</b> menu.

### Network Printer Options

Choose which type of network printer to use. Choices are **Novell Print Queue**, which allows you to route files to any print queue on the network, and **Device driver**.

**TABLE 2-3**  
Network Printer Options

Option	Description
NETn network type	<p>Novell Print Queue – Default. Direct the output files to the specified Novell print queue.</p> <p>Device driver – Direct the output files to the specified DOS device driver.</p>

### Novell Print Queue

For each NET device, select a print queue and file server for all output. If you select **Novell Print Queue** as the **NETn network type**, the following screen displays.

```

                                Network Printer Options

                                NET1 network type: Novell Print Queue
                                printer type: Generic

NET1

File server: _____
Print queue: _____
User name:   _____
Password:   _____
Use Novell print banners? Yes
Display jobname on print banners? Yes
Add form feed between jobs? Yes

                                Choice? + -

```

From this screen, the following options are specified.

**TABLE 2-4**  
Network Printer Options Screen

Option	Description
File server	Enter the <b>File server</b> names for the NET device.
Print queue	Enter the <b>Print queue</b> names for the NET device.

Option	Description
<b>User name</b> <b>Password</b>	<p>A <b>User name</b> and <b>Password</b> must be specified in order to connect to servers PRINT/GATE is not logged into. Only one <b>User name</b> and <b>Password</b> may be used for logging into all the servers. The <b>User name</b> and <b>Password</b> entered for a NET device will display on all the <b>NETn</b> device screens. If these fields are changed on one screen, the change will be reflected on all the other NET device screens.</p> <p>During operation, if the software is already logged into a given server, the existing login is used. No additional login is done even if PRINT/GATE is logged in with a different user name than that specified in the <b>User name</b> field.</p> <p>If the Barr software performs a login to connect to a print queue, then when the print job completes it will be logged out. PRINT/GATE can only be logged into eight file servers at one time. If a login is needed but the software is already logged into eight servers, login is deferred until a print job completes and frees a server slot.</p> <p>The <b>Password</b> will not display on the screen as it is entered. The Barr software uses a keyed login to allow login on servers restricted to encrypted passwords.</p>
<b>Use Novell print banners?</b>	<p><b>Yes</b> – Default. A Novell print banner page will be generated which includes the Novell user name.</p> <p><b>No</b> – No print banner will be generated.</p>
<b>Display jobname on print banners?</b>	<p>This option does not apply to 3270 data, because the jobname is not supplied in the 3270 data stream.</p>
<b>Add form feed between jobs?</b>	<p><b>Yes</b> – Default. Form feeds will be added between print jobs. This is useful when sending jobs to laser printers to ensure that the last page of the job is flushed from the printer before the next job starts.</p> <p><b>No</b> – Form feeds will not be added.</p>

## Device Driver

If you select **Device driver** as the **NETn network type**, the following screen displays.

```

                                Devices and Printers

                                NET1 network type: Novell Print Queue
                                printer type: Generic

Use this device
Delete this device

Network printer options
Choose printer type
Escape

Miscellaneous printer options
Printer control data
Escape

                                Selection ↑↓←→
```

- Select **Network printer options**.

```

                                Network Printer Options

                                NET1 network type: Device driver
                                printer type: Generic

Device name:_____

                                Enter character
```

- Select **Device driver**.

The following option is specified.

**TABLE 2-5**  
Network Printer Options Screen

Option	Description
Device name	<p>Enter the DOS device name for the network printer, for example LPT1.</p> <p>When printing files using the network device type <b>Device Driver</b>, if you enter a file name as the device name, any files with duplicate names will be renamed using Barr's automatic generation of numeric file extensions. Barr will assign the first file with a duplicate name an extension of .001, the next file with that same name will have extension .002, and so on. (If extension .999 is reached, a #1 will be placed at the end of the file name and the extension sequence will start again, continuing until <b>myfile#10.999</b> is reached. For example: <b>...myfile.999, myfile#1.000, myfile#1.001, ...myfile#1.999, myfile#2.000...myfile#10.999.</b>)</p>

### Choose Printer Type

On every printer, you can manually set lines-per-form and lines-per-inch. As an alternative to manually making these adjustments, the Barr software automatically sets the lines-per-form and lines-per-inch for you if you use one of the printers listed on the following screen.

```

                                Choose Printer Type

                                LPT1 printer type: DAVFU, Dataproducts

Generic (Printer is not listed below. User must manually set
lines-per-form.)
ANSI (DEC compatible)           NCR 6430, Fujitsu (RS232)
C. Itoh CI300, CI600           OKIDATA 92, 93
DAVFU, Dataproducts         OKIDATA 2410, 2350
D.P.I.                          OKIDATA 2410 (IBM compatible)
EPSON, IBM Proprinter, 6262 "A" Printronix P300, P600
Florida Data 120, 130          Printronix P300, P600 with IGP
Genicom 4410, 4440             Printronix P6000
Genicom 1255, Linewriter       Sand, Fujitsu M304X, Hitachi FP1500
Hewlett-Packard 256X           STC (D.P.I.)
Linewriter (RS232)

                                Selection ↑↓→

```

- Select printer type (in this example, **DAVFU Dataproducts**).

---

**Note:**

Only the lines-per-form is set when you use the **Printronic P300**, **P600**, or the **DAVFU**, **Dataproducts** option. The lines-per-inch is not set and should be set manually.

---

## Miscellaneous Printer Options for Network Printers

For network printers, there is one printer option.

<p>Miscellaneous Printer Options</p> <p>NET1 network type: Novell Print Queue printer type: Generic</p> <p>Log operations on console? <u>Yes</u></p> <p style="text-align: right;">Choice? + -</p>
--

TABLE 2-6

Miscellaneous Printer Option

Option	Description
Log operations on console?	<p>This option controls the display of <b>START NETn</b> and <b>END NETn</b> console messages when output is sent to the NET devices.</p> <p><b>Yes</b> – Default. <b>START</b> and <b>END</b> messages will display on the console when jobs are sent to the NET device.</p> <p><b>No</b> – No status messages will display on the console when jobs are sent to the NET device.</p>

## Printer Control Data for Network Printers

It is important to send an appropriate reset string at the beginning of each file printed on a network printer. These printers print data from many different applications, and data from the Barr software may not print correctly unless the proper reset string is sent.

Printer reset strings should be entered in the **Printer control data** table for the NET devices. Refer to Section 5.4 of the *BARR/3270* manual for a complete discussion on **Printer control data**.

## Complete NET Device Definitions

Repeat the steps in this section (2.4) for each **NET** device.

Under **Assign Devices**, the **NET** devices can now be used the same as any other destination device. Device assignment is discussed in Section 2.5 of this manual.

## 2.5 Assign Devices

After you have completed the definition for the 3270 printers, you need to assign output from the printer sessions to the destination queues on the network. The features of the **Assign Devices** menu are explained in detail in Section 5.5 of the *BARR/3270* manual. This section covers assigning the devices that are unique to **PRINT/GATE**.

- From the **Installation Description** menu, select **Assign Devices**.

```

                                Installation Description

3270 Description
3270 Printers
Communication Link
Devices and Printers: LPT, COM, NET, SEND, LAN
Assign Devices
Monitor and Adapter
Modem Type and Dialing Instructions
Startup Screen Notes
Interrupt Request, Address, and Loopback Test
Tuning Data (seldom used)

Exit and Save Changes

                                Selection ↑↓→
```

The following screen will display.

```

                                Assign Devices

LOG-NUL LU1-NET1 LU2-NET2 LU3-NET3 LU4-NET4 LU5-NET5 LU6-NET6
LU7-NET7 LU8-NET8 LU9-NET9 LU10-NET10 LU11-NET11 LU12-NET12 LU13-NET13
LU14-NET14 LU15-NET15 LU16-NET16 LU17-NET17 LU18-NET18 LU19-NET19
LU20-NET20 LU21-NET21 LU22-NET22 LU23-NET23 LU24-NET24

Queue:QUEUE1                                Server:SERVER1
Select SOURCE-DESTINATION.                    Escape Selection ↑↓→
```

On the **Assign Devices** menu, the printer session LUs (**LU<sub>n</sub>**) will appear as sources and the network print queues (**NET<sub>n</sub>**) will display as destinations. As you cursor through the Source device selections, the print queue and server names for each **NET** device will display at the bottom of the screen.

The default is for output from each printer session to be assigned to a different network queue. However, you can assign several printer sessions to the same network device or you can change which queue a network device will print to.

```

                                Assign Devices

LOG-NUL LU1-NET1 LU2-NET2 LU3-NET3 LU4-NET4 LU5-NET5 LU6-NET6
LU7-NET7 LU8-NET8 LU9-NET9 LU10-NET10 LU11-NET11 LU12-NET12 LU13-NET13
LU14-NET14 LU15-NET15 LU16-NET16 LU17-NET17 LU18-NET18 LU19-NET19
LU20-NET20 LU21-NET21 LU22-NET22 LU23-NET23 LU24-NET24

Queue:QUEUE1                                Server:SERVER1
                                Select SOURCE-DESTINATION.      Escape Selection ↑↓←→

```

- Select a printer session, for example, **LU1**.

A list of destination devices will display. As you cursor through the destination device selections, the print queue and server names for each **NET** device will again appear at the bottom of the screen.

```

                                Assign Devices

DESTINATION? (FILE) SCREEN NUL SUSPEND LPT1 NET1 NET2 NET3 NET4

Queue:QUEUE2                                Server:SERVER1
                                                Selection ↑↓←→

```

- Select the desired network queue, for example, **NET2**.

The **Assign Devices** menu will reflect the assignment change.



```

                                Assign Devices

LOG-NUL LU1-NET2 LU2-NET2 LU3-NET3 LU4-NET4 LU5-NET5 LU6-NET6
LU7-NET7 LU8-NET8 LU9-NET9 LU10-NET10 LU11-NET11 LU12-NET12 LU13-NET13
LU14-NET14 LU15-NET15 LU16-NET16 LU17-NET17 LU18-NET18 LU19-NET19
LU20-NET20 LU21-NET21 LU22-NET22 LU23-NET23 LU24-NET24

Queue:QUEUE2                                Server:SERVER1
Continue      Escape      Receive Mode    Options      Help

```

Output from printer session 1 (LU1) is now directed to network printer 2 (NET2), which has been defined to be print queue 2 (QUEUE2) on print server 1 (SERVER1).

### Complete the 3270 Installation

Enter the remaining installation parameters according to the instructions in Chapter 5 of the *BARR/3270* manual. Remember to select **Exit** and **Save Changes** from the **Installation Description** menu when you are done in order to save the configuration parameters.

To re-enter the **Installation Description** at a later time, at your DOS prompt, type:

```
PRT_GATE i
```

## 2.6 Buffer Allocation

When defining a total of 10 or more 3270 sessions, it probably will be necessary to increase the buffer allocation in the Barr software.

From the **Installation Description** screen, select **Tuning Data**. The **Tuning Data** menu will display.

```

                                Tuning Data

These parameters seldom need changing.

Edit ASCII and EBCDIC Translation Tables
Printer Control
Additional Parameters
Modem and Line Control
Restart Actions
Escape

                                Selection ↑↓←→

```

- **Select Additional Parameters.**

```

                                Additional Parameters

Memory allocated for buffers: 100000
Extended memory allocated for buffers: 0 Kbytes
Number of minutes before screen save: 9999

Disable Installation Description? No
Disable Receive mode in Assign Devices? No
Fast scroll used on CGA color monitor adapter? No
Initial session is? OPER
Disable DOS session? No
DOS session executes AUTOCMD.BAT? No
Hot key uses? Ctrl-Alt
XPAF special: Vertical Channel Select sets print column to zero? No
Use VERIFY OFF to improve disk performance? Yes
Always Create Individual Dataset Separator Files? No

                                Enter number

```

- Enter the desired values for DOS buffers in **Memory allocated for buffers** and extended memory in **Extended memory allocated for buffers**.

Depending on the total number of sessions you define, you may need to define as much as 150,000 for **Memory allocated for buffers** and 150K for **Extended memory allocated for buffers**. With 10 or more sessions, we recommend you define this much initially. Then, while utilizing the maximum number of sessions you defined, you can monitor free buffer space to determine whether these values can be reduced.

Buffer usage can be monitored during operation from the **Communications Statistics** screen. From the **Operation** menu, select **Advanced, Diagnostics**, then **Communications Statistics**.

```

0 lines read.
0 lines printed or punched.
0 SNA sessions active.

0 real buffers in use.
371 real buffers free.
0 XMS buffers in use.
0 XMS buffers free.
page 1 next page reset Any key

```

- Monitor the values for **real buffers free** and **XMS buffers free**.

For more information on these menu options, refer to your *BARR/3270* manual.

## 2.7 Sample PRINT/GATE Configuration

The following example shows how the PRINT/GATE installation screens would look with the following configuration.

Five CICS, three IMS, and six TSO printer sessions will be defined, for a total of 14.

The printer sessions will write to queues based on their application. Each CICS session will write to a different queue on one server, each TSO session will write to a different queue on another server, and all IMS sessions will write to the same queue on a third server. Thus, a total of 12 queues on three servers will be needed.

Table 2-7 is an outline of the planned configuration.

**TABLE 2-7**  
Sample PRINT/GATE Configuration

Printer Session	Application	Print Queue
1	CICS	Server 1, Queue 1
2	CICS	Server 1, Queue 2
3	CICS	Server 1, Queue 3
4	CICS	Server 1, Queue 4
5	CICS	Server 1, Queue 5
6-8	IMS	Server 2, Queue 1
9	TSO	Server 3, Queue 1
10	TSO	Server 3, Queue 2
11	TSO	Server 3, Queue 3
12	TSO	Server 3, Queue 4
13	TSO	Server 3, Queue 5
14	TSO	Server 3, Queue 6

Next, the necessary parameters are entered into the Barr software. Only the completed configuration screens are shown.

- From the **Installation Description** menu, select **3270 Printer Sessions**.

```

                                3270 Printers

Number of 3270 Printers: 14

      LU      LUNAME                      LU      LUNAME
      03      CICS-1                      15      TSO-5
      04      CICS-2                      16      TSO-6
      05      CICS-3
      06      CICS-4
      07      CICS-5
      08      IMS-1
      09      IMS-2
      10      IMS-3
      11      TSO-1
      12      TSO-2
      13      TSO-3
      14      TSO-4

Enter character

```

- Enter 14 for the number of 3270 printers, and name the printer LUs for their applications.
- From the **Installation Description** menu, select **Devices and Printers**.
- On the **Devices and Printers** menu, select **NET1-12**.

```

                                NET Devices

NET1  QUEUE-1          Use      (Generic)
NET2  QUEUE-2          Use      (Generic)
NET3  QUEUE-3          Use      (Generic)
NET4  QUEUE-4          Use      (Generic)
NET5  QUEUE-5          Use      (Generic)
NET6  QUEUE-1          Use      (Generic)
NET7  QUEUE-1          Use      (Generic)
NET8  QUEUE-2          Use      (Generic)
NET9  QUEUE-3          Use      (Generic)
NET10 QUEUE-4          Use      (Generic)
NET11 QUEUE-5          Use      (Generic)
NET12 QUEUE-6          Use      (Generic)

Escape

Selection ↑↓←→

```

- For **NET1** through **NET12**, select **Network printer options** and choose **Novell Print Queue** as the **NETn network type**. Define the first five **NET** devices as **QUEUES 1-5** for **SERVER-1**, define **NET6** as a queue for **SERVER-2**, and define **NET7-12** to write to **QUEUES 1-6** on **SERVER-3**.
- Finally, assign the printer sessions to the destination Novell print queues. From the **Installation Description** menu, select **Assign Devices**.

```

                                Assign Devices

LOG-NUL CICS-1-NET1 CICS-2-NET2 CICS-3-NET3 CICS-4-NET4 CICS-5-NET5
IMS-1-NET6 IMS-2-NET6 IMS-3-NET6 TSO-1-NET7 TSO-2-NET8 TSO-3-NET9
TSO-4-NET10 TSO-5-NET11 TSO-6-NET12

Queue:QUEUE1                               Server:SERVER1
                                Select SOURCE-DESTINATION.      Escape Selection ↑↓←→

```

## Complete the Installation

Configuration is complete for the printer sessions, which will write to the network printers. Next, enter the remaining 3270 parameters, then remember to save your changes by selecting **Exit and Save Changes** from the **Installation Description** screen.

To re-enter the **Installation Description** at a later time, at your DOS prompt, type:

```
PRT_GATE i
```

## 2.8 Host Definition

After you have entered the **Communication Link** parameters, as described in Section 5.3.0 of the *BARR/3270* manual, the host definition parameters will display on the computer screen. The **PRINT/GATE** host definition will be similar to a *BARR/3270* definition for your particular host connection, with these differences:

- The value for **MAXLU** will be larger, reflecting the number of LUs defined.
- The host LU names and the **LUNAMES** defined in the Barr software must match.

Refer to Section 5.3.0 of the *BARR/3270* manual for a detailed discussion of the host parameters.

For example, with an SDLC dial-up connection, you will see the following screens.

## NCP Definition

```
(These screens are for your host.)
NCP Definition for Dial Line

Reference: VTAM Installation and Resource Definition, SC23-0111
           NCP Resource Definition Guide, SC30-3447
           NCP Resource Definition Reference, SC30-3448
Source statements are in SYS1.VTAMLST(NCP).

group      GROUP DIAL=YES,LNCTL=SDLC
linename   LINE  ADDRESS=(aaa,FULL),DUPLEX=FULL,           X
           NRZI=YES,RETRIES=(8,2,20),SPEED=nnnnnn,TRANSFR=16
puname     PU    MAXLU=28

                                           Any key
```

**MAXLU=** The maximum number of LUs needed for local terminal sessions, local printer sessions, and network printer sessions.

## Physical Unit Definition

Local 3270 terminal sessions should be defined to your host first, followed by any local 3270 printer sessions, then the 3270 printer sessions for the network printers. Remember that the LU names in your host definition and the LUNAMES defined in the Barr software must match.

(These screens are for your host.)  
Physical Unit Definition of Dial Device

Source statements are in SYS1.VTAMLST(SWITCHED).  
Reference: VTAM Installation and Resource Definition, SC23-0111

puname	PU	ADDR=C1,DATMODE=FULL,				X
		IDBLK=03D,				X
		IDNUM=12345,				X
		MAXDATA=0521,MAXOUT=7,				X
		PACING=7,PASSLIM=7,VPACING=7				
luname02	LU	LOCADDR=2,DLOGMOD=D4C32782	**	3270	LU	
luname03	LU	LOCADDR=3,DLOGMOD=D4C32782	**	3270	LU	
luname04	LU	LOCADDR=4,DLOGMOD=D4C32782	**	3270	LU	
luname05	LU	LOCADDR=5,DLOGMOD=D4C4K	**	3270	LU	
LU1	LU	LOCADDR=6,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU2	LU	LOCADDR=7,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU3	LU	LOCADDR=8,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU4	LU	LOCADDR=9,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU5	LU	LOCADDR=10,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU6	LU	LOCADDR=11,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU7	LU	LOCADDR=12,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU8	LU	LOCADDR=13,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU9	LU	LOCADDR=14,DLOGMOD=DSC4K	**	3270	PRINTER	LU

Any key

LU10	LU	LOCADDR=15,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU11	LU	LOCADDR=16,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU12	LU	LOCADDR=17,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU13	LU	LOCADDR=18,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU14	LU	LOCADDR=19,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU15	LU	LOCADDR=20,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU16	LU	LOCADDR=21,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU17	LU	LOCADDR=22,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU18	LU	LOCADDR=23,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU19	LU	LOCADDR=24,DLOGMOD=DSC4K	**	3270	PRINTER	LU
LU20	LU	LOCADDR=25,DLOGMOD=DSC4K	**	3270	PRINTER	LU

Any key

*Notes:*



# 3. Operation

---

Once you have configured the PRINT/GATE software, you simply need to run it. Basic startup and device assignment steps are discussed in this chapter. Refer to chapters 7 and 8 of your *BARR/3270* manual for detailed startup and operation instructions.

## 3.1 Startup

To run the PRINT/GATE software, at your DOS prompt, type the command **PRT\_GATE**.

```
c>PRT_GATE
```

## 3.2 Assign Devices

During operation, you can make changes to the routing of printer session output. Remember that any changes you make here are only temporary. Permanent changes must be entered in the Installation Description.

To reach the **Assign Devices** menu during operation, from the **Operation** menu, select **Advanced**, then **Assign Devices**.

You can dynamically alter the destination for printer session output or temporarily suspend output from printer sessions. Any printer sessions you defined in the installation program but did not assign to a network queue destination will default to **SUSPEND**.

```
LOG-NUL LU1-NET2 LU2-NET2 LU3-NET3 LU4-NET4 LU5-NET5 LU6-NET6
LU7-NET7 LU8-NET8 LU9-NET9 LU10-NET10 LU11-NET11 LU12-NET12 LU13-NET13
LU14-NET14 LU15-NET15 LU16-NET16 LU17-NET17 LU18-NET18 LU19-NET19
LU20-NET20 LU21-NET21 LU22-SUSPEND LU23-SUSPEND LU24-SUSPEND

Queue:QUEUE2                               Server:SERVER1
Select SOURCE-DESTINATION                   Escape Selection ↑→←
```

### 3.3 Monitoring the 3270 Printers

The 3270 printer sessions can be monitored from the **Printer session status** screen.

For each network printer LU defined, this screen shows the LU number, LU name, status, application ID, number of lines received, and the destination for the printer output.

You can reach the 3270 **Printer session status** screen from the **Operation** screen by using any of three methods:

- Select **Advanced**, then **Sessions**, and then **Printer**.
- Hold CTRL+ALT and then press P.
- Hold CTRL+ALT and then press the space bar to step through the sessions until you reach the status screen.

LU	LUNAME	Status	APPLID	Lines	Queue/Server
03	CICS-1	INACTIVE		0	QUEUE-1 SERVER-1
04	CICS-2	INACTIVE		0	QUEUE-2 SERVER-1
05	CICS-3	INACTIVE		0	QUEUE-3 SERVER-1
06	CICS-4	INACTIVE		0	QUEUE-4 SERVER-1
07	CICS-5	INACTIVE		0	QUEUE-5 SERVER-1
08	IMS-1	INACTIVE		0	QUEUE-1 SERVER-2
09	IMS-2	INACTIVE		0	QUEUE-1 SERVER-2
10	IMS-3	INACTIVE		0	QUEUE-1 SERVER-2
11	TSO-1	INACTIVE		0	QUEUE-2 SERVER-2
12	TSO-2	INACTIVE		0	QUEUE-2 SERVER-2
13	TSO-3	INACTIVE		0	QUEUE-2 SERVER-2
14	TSO-4	INACTIVE		0	QUEUE-2 SERVER-2

Esc PgUp PgDn

Use the PAGE UP or PAGE DOWN keys to scroll through the list of printer sessions.

The following status information displays.

**TABLE 3-1**  
Printer Session Status Screen

<b>Status</b>	<b>Description</b>
<b>LU</b>	The number of the LU assigned to the printer session.
<b>LUNAME</b>	The name of the LU assigned to the printer session.
<b>Status</b>	<p>The status of the printer session. Possible states include:</p> <p><b>Inactive</b> – The printer session LU has not been activated by VTAM.</p> <p><b>Available</b> – The printer session LU has been activated by VTAM and is ready for communication.</p> <p><b>Bound</b> – The printer session LU has bound with the printer application and is active.</p>
<b>APPLID</b>	The printer session's application ID.
<b>Lines</b>	The total number of print lines received by the printer session.
<b>Queue/Server</b>	The print queue and server destination assigned in the Barr software.

If you need additional status information on your 3270 printer sessions, a 3270 terminal session may be used to monitor them. Contact your host to find out what utilities may be available to you for this purpose.

*Notes:*

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