

# INSTALLATION

## Before you begin

- 1) A compatible release of Remote SpoolPrint must be installed on all systems which will be sending or receiving printed output. See Appendix F, "Release Compatibility Table" for more information.
- 2) Use these instructions if you are installing Remote SpoolPrint3X/400 for the first time. If you are updating your existing Remote SpoolPrint software to a new release, use the Update Instructions provided with the update package.
- 3) Remote SpoolPrint/370 users: Refer to the "Remote SpoolPrint/370 Reference Manual" for setting up the S/370, and for example S/3X, AS/400 to S/370 configurations. Use this manual to install Remote SpoolPrint on the S/3X or AS/400.
- 4) A temporary password is needed once Remote SpoolPrint is installed. The same temporary password will work on all machines. If you plan to install Remote SpoolPrint after business hours, you may wish to call Broderick Data Systems in advance to get your temporary password.
- 5) Remote Distribution: See Appendix D, "Media Distribution" for information concerning distributing Remote SpoolPrint media to remote sites via communications.
- 6) AS/400 users: The install procedure will create a user profile BDSUSER, password BDSPASS. See Appendix E, "AS/400 Security Considerations" for more information.

## *Prerequisites*

The following hardware and system software is needed to execute Remote SpoolPrint3X/400. Please insure that all needed equipment and system software is installed before beginning the installation.

### **AS/400**

OS/400 Version 5, Release 3, Modification 0 or later

For TCP operation:

- TCP/IP Connectivity Utilities (57xx-TC1)

For TCP operation with Secure Socket layer (SSL):

- IBM HTTP Server for AS/400 (57xx-DG1)
- Digital Certificate Manager (Product Option 34)
- Cryptographic Access Provider for AS/400 (57xx-AC3)

One of the following:

An available communications adaptor for each remote system (See note 2)

A TCP/IP connection to the other AS/400's that are using Remote SpoolPrint/400

Data Communications Equipment (Modems, Phone Circuit, etc.)

### **System/36**

SSP Release 5.1 or greater with the following feature:

Base Communications FC 6001 (see note 1)

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An available communications adaptor for each remote system (See note 2)

Data Communications Equipment (Modems, Phone Circuit, etc.)

## Note 1

Base Communications is a no charge feature ordered from IBM. It is a prerequisite for Display Station Passthru, DDM, and other IBM communications features.

## Note 2

Remote SpoolPrint3X/400 can share a communications line with other applications to the same remote system (i.e. DDM and Display Station Passthru). Remote Spool Print can also participate in a multipoint configuration. If you have any questions regarding equipment needed to execute Remote SpoolPrint/3X/400, please contact Broderick Data Systems or your local IBM Systems Engineer.

## *Installation*

Perform the following steps for each S/36 or AS/400 in your network. Remote SpoolPrint3X/400 must be installed on every machine which will send or receive printed output.

## *System/36 Machines*

**WARNING:** Refer to "Before you begin" on page 2-1 before proceeding.

- 1) Sign on to the System/36 as a security officer.
- 2) If Remote SpoolPrint is not the first product from Broderick Data Systems installed on this System/36, then you may skip this step and proceed to step
- 3) Build library BDSLIB. Enter the following command:

**BLDLIBR BDSLIB,300,30**

- 4) Restore the media from diskette

a) Place the diskette into slot 1

b) Enter the following command:

**RESTORE RSPLLIB**

c) Enter the following command:

**Note:** Remote SpoolPrint/36 requires 300 blocks and 30 directory sectors.

**TOLIBR RSPLLIB,F1,,REPLACE,BDSLIB,,,,ALL,LIBRARY**

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Answer 0 to SYS-2594 -- Trying to copy privileged modules.

d) Delete the work file:

**DELETE RSPLLIB,F1**

5) Restore the control file from diskette:

**RESTORE BDS.RSCT**

Remote SpoolPrint/36 is now installed on the System/36. Refer to the section "Additional S/36 Setup" later in this chapter for more setup activities.

## *AS/400 Machines*

**WARNING:** Refer to "Before you begin" on page 2-1 before proceeding.

- 1) Sign on as QSECOFR
- 2) Load the media.
- 3) Restore the install objects. Enter one of the following:

If you are using Tape:

**RSTOBJ OBJ(BRSPLIN\*) SAVLIB(RSPL40) DEV(xxxxxx) VOL(\*MOUNTED)  
RSTLIB(QTEMP)**

If you are using CD-ROM:

**RSTOBJ OBJ(BRSPLIN\*) SAVLIB(RSPL40) DEV(OPT01)VOL(BDS)  
RSTLIB(QTEMP) OPTFILE(RSPL40)**

If you are using a Save file:

**RSTOBJ OBJ(BRSPLIN\*) SAVLIB(RSPL40) DEV(\*SAVF) SAVF(IIII/ffff)  
RSTLIB(QTEMP)**

Enter the lib/name of the save file containing library **RSPL40**.

- 4) Execute the install command. Enter one of the following:

If you are using Tape or CD-ROM:

**QTEMP/BRSPILNS DEV(xxxxxx)**

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If you are using a Save file:

**QTEMP/BR SPLINS DEV(\*SAVF) PGMSAVF(aaaaa)**

Enter the save file containing library **RSPL40**.

The message "Installation of Remote SpoolPrint/400 is complete." should appear. If any other message appears, the installation may not have completed properly.

Remote SpoolPrint/3X/400 is now installed on the AS/400.

5) Access the BDS Software Server (optional).

**Note:** Your AS/400 must be connected to the Internet to perform this procedure.

a) If you have not done so previously, access the tailoring options screen:

**BRODERICK/BR SPLSETUP**

b) Note the fields "BDS Access Userid" and "Password". You will need a user ID and password to access some of the server options. If needed, contact BDS administration to get this information. If you add your user id and password, press **ENTER** to enter them and re-enter the setup command.

c) Press F14, E-Comm. The Software Server display will appear. Take note of the options available to you. When you are finished, press F3 to exit

## *Defining Network Objects*

**Note:** If your installation is using TCP/IP to communicate to other AS/400s, refer to Appendix I. "TCP/IP Considerations" for more setup information.

**Note:** If your installation is currently using Display station Passthru, you can use the same objects (LIND, CUD, DEVD, DEVMODE, ICF Line and Subsystem) for Remote SpoolPrint3X/400.

Define the communications objects required to connect your Remote Spool Network. Refer to the following IBM manuals:

AS/400 CL Reference  
S/36 ICF Base Guide and Examples  
S/36 Systems Reference  
S/36 Messages

Please note that due to the great flexibility of communications, and the endless number of unique situations that arise, this manual will not attempt to completely explain the communications setup required. Instead, Broderick Data Systems will assist you via telephone support in the configuration of your systems. Also, Appendix C, "Configuration Examples" includes working examples.

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Objects needed to use Remote SpoolPrint3X/400 are as follows:

## **Source AS/400**

For each target AS/400:

- Line Description
- Control Unit Description
- Device Description
- Device Mode Entry

For each target printer:

- Outq

## **Source System/36**

- Line description (SETCOMM)
- ICF Line Member
- ICF Subsystem Member
- \*NULL user ID

For each Target Printer:

"Dummy" Printer (CNFIGSSP)

For each Target AS/400 System:

Remote Location entry (SECEDIT COMM)

## **Target AS/400**

For each source AS/400:

- Line Description
- Control Unit Description
- Device Description
- Device Mode Entry
- Subsystem Communication entry

For each target printer:

- Outq

## **Target System/36**

- Line description (SETCOMM)
- ICF Line Member
- ICF Subsystem Member
- \*NULL user ID

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Example configurations can be found in Appendix C, "Example Configurations". For additional assistance in the configuration of your remote spool network, contact Broderick Data Systems or your local IBM Systems Engineer.

## Additional System/36 Setup

- 1) Add a user profile \*NULL (using the procedure SECEDIT) if security is active.
- 2) For each System/36 which will send output to another system, configure a 'dummy' remote control unit, dial up, and enough 'dummy' printers for each source printer you will use, (refer to the section "Remote Writer Planning" below. Each Remote Writer created will need a printer ID which is not used by a real printer. Use the SSP CNFIGSSP command to define the 'dummy' control unit and printers. At IPL, the operator must stop all 'dummy' printers using the STOP PRT,xx procedure. Use the following steps as a guide:
  - a) Enter the configuration utility (CNFIGSSP).
  - b) Change a configuration, work with display stations and printers.
  - c) Add a Remote Line characteristic (option 2) for the line APPC is using if one doesn't exist. Make the line switched, manual call. SSP will issue a caution message.
  - d) Add a Remote Control Unit (option 3). Define it as a 5294. Add 1 display (code 01) and 6 printers (code PC) to port 0 and add a printer (code PC) to port 1.
  - e) Change the newly created workstation ID's (option 6) to conform to user conventions. For example, name the display R0 and the printers R1 thru R7.
  - f) Return, Exit and Save the configuration.
  - g) When all other users are off the system, apply the changes to the master configuration record.
- 3) (Optional) Add a line to procedure #STRTUP2 in library #LIBRARY to automatically enable communications at IPL and start the remote writers.

a) Enter SEU:

```
SEU #STRTUP2,P,,#LIBRARY
```

b) Add the following line:

```
ENABLE AS400A,COMM,1
```

**Note:** If you want your Remote Writers to start automatically at IPL, place a STOP PRT and STRRMWTR command for each desired Remote Writer after the ENABLE statement:

```
// STOP PRT,xx  
STRRMWTR S36BP1,xx
```

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- 4) For each target AS/400, add a Remote Location Entry. Use the SECEDITCOMM procedure. See Appendix C, Section "AS/400 to S/36, S/38, and AS/400 Example" for more information.

## *Remote Writer Planning*

Once network objects are defined, the user can define Remote Writers to transmit output from one system to another. The following steps should be taken to design your printer network:

- 1) Sketch your communications network. The sketch should include a box for each CPU in the network. Connect the boxes with lines representing actual or proposed communication links.
- 2) Indicate, for each CPU in the network, the object used to communicate to the remote system(s). For S/36, it will be a Remote Location name and Session Group Name. For S/38, it will be a Device Description Name and Device Mode Name. For AS/400, it will be a Remote Location Name and Device Mode Name. For example, a S/38 to S/36 link, the S/38 may use DOVERDEV1, MODE1 to communicate to the S/36 and the S/36 uses HOST38, MODE1 to communicate to the S/38.
- 3) Identify all printers in the network which will receive output from other systems (target printers) and place them on the sketch next to the system they are connected (locally) to. Indicate the printer ID (S/36) or outq (S/38, AS/400) on the sketch.
- 4) Decide which systems will send output to the printers indicated in step 3). A dummy printer ID (S/36) or outq and library (S/38, AS/400) must be created on each system for each target printer it will send output to. This dummy printer ID/outq will be used to hold output until Remote SpoolPrint3X/400 can transmit it to the target system.

**Note:** Many users have confused source and target printer ID's when setting up S/36 to S/36 Remote Writers. For clarification, please remember that you indicate the printer ID of the remote S/36 (i.e. where the output is to print) when you define the Remote Writer and you indicate the printer ID of the local S/36 (i.e. the 'dummy' printer you set up) when you start the remote writer.

- 5) Create Remote Writers on each system that will send output to another system. A Remote Writer must be defined for each target printer each system will send to. For example, if S36A will send output to P1 and P2 on S36B, and to QSYSPRT.QGPL on S38A, 3 Remote Writers (and 3 dummy printers) must be created on S36A. Please note that there is no setup required on the target system (unless it is also a source system).
- 6) Start the remote writers. You may wish to place the STRRMTWTR (S/38), or STRRMWTR (S/36 and AS/400) commands into your IPL startup programs to start the Remote Writers automatically.