

APPENDIX B: ADDITIONAL FUNCTIONS

This Appendix describes additional functions included with Remote SpoolPrint3X/400.

System/38, AS/400 Tailoring Options

Please note that the tailoring options apply only to System/38 and AS/400 machines. To access the additional functions display, enter the command BRSPLSETUP. The following screen should appear: (The data fields on your screen may appear slightly different).

Remote SpoolPrint/400		xx/xx/xx
Setup Display		14:04:59
Rel: XX	CPU Serial: XXXXXXXXX	System Name: XXXXXXX
Mod: XX	Model: XXX	Proc Feat: XXXX
PTF: XXXX	LPAR Num: XXXX	Proc Grp: XXX
Permanent Password: 1ABCDEF2G3HIJ456		Hex Digits (0-9, A-F)
Temporary Password: A1B2C3D4E5F6		Hex Digits (0-9, A-F)
High Avail Password: 1ABCDEF2G3HIJ456		Hex Digits (0-9, A-F)
Dft Dev Mode: BLANK		Name, *NETATR
User Exit Pgm 1: N		Y, N
Dft User Profile: *CREATE		Name, *CREATE
Delete User Profile: Y		Y, N
APPC User ID, Password: BDSUSER	BDSPASS	Name, *NONE, *USER
User Exit Pgm 2: N		Y, N
Log Outgoing Spool Ent: *SELECT		*ALL, *NONE, *SELECT
Log Incoming Spool Ent: *SELECT		*ALL, *NONE, *SELECT
BDS Access User, Passw:		character
CMD-3 Exit w/o Update F10=TCP Server		F14=BDS SwSvr

The BRSPLSETUP command has the following parameters:

REL/MOD/PTF

Specifies the release, modification, and PTF level of Remote SpoolPrint3X/400. This value should match the value printed on your Remote SpoolPrint3X/400 media.

Password

You will be instructed to enter this field when you receive your permanent/temporary passwords from BDS. If this machine is being replicated to a High Availability machine, specify the Permanent Password for the HA machine in the High Avail Password field. This will allow you to cut over to the HA machine

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without changing passwords. Note: You must purchase an HA license from Broderick Data Systems in order to receive an HA password.

Exp Date (S/36 & S/38 ONLY)

Used to calculate the end of the trial period.

Dft Dev Mode (Default Device Mode)

Specifies the device mode to use if DEVMODE(*DFT) is specified when creating a Remote Writer. This field is mainly used for compatibility with earlier releases; you should define the device mode when creating the Remote Writer.

User Exit Pgm 1

Specifies if Remote SpoolPrint3X/400 is to call a user written program.

Remote SpoolPrint3X/400 will optionally call a program BRSPLEXIT1 in library *LIBL immediately before deleting (or holding if SAVE(*YES)) the transmitted spool entry. The exit program can be compiled by the user to perform certain tasks. For example the user may wish to print the spool file on another printer or keep all printed output in a special 'archive' outq. A sample exit program is provided in the source file BRSP38SRC in library BRODERICK.

To activate the exit program, enter 'Y' on the User Exit Pgm 1 field. To deactivate the user exit program, enter 'N'. The parameters passed to the user exit program are:

<u>Num</u>	<u>Description</u>	<u>Type</u>	<u>Length</u>
1	Spool File Job Name	Character	10
2	Spool File Job User ID	Character	10
3	Spool File Job Number	Character	6
4	Spool File Name	Character	10
5	Spool File Number	Character	6
6	Save Attribute (*YES or *NO)	Character	10
7	Perform Cancel/Hold	Character	4

Please note that the Remote Writer Name can be retrieved by using the RTVJOBA command. The Job's name is the Remote Writer name.

Upon returning from the exit program, Remote SpoolPrint3X/400 will check the Perform Cancel/Hold parameter, and only delete/hold the spool file if it's value is '*YES'.

Dft User Profile/Delete User Profile

Specifies, only for S/38 to S/38 or AS/400 to AS/400 Remote Writers which are not using SNADS, how to process User profiles. In order to maintain job user information when the spool entry is passed to the target System/38 or AS/400, Remote SpoolPrint3X/400 will need the user profile on the target system. In many S/38 or AS/400 installations the user profile used to create the spool entry may not exist on the target system. The user has the option to either create the user profile, or use a default user profile.

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Specify *CREATE to allow Remote SpoolPrint3X/400 to create a user profile if it does not currently exist on the target system, or specify a default user profile. If a default user profile is specified, all transmitted spool entries which have a user profile attribute which does not exist on the target system will adopt the default user profile. Please note that all user profiles created by Remote SpoolPrint3X/400 will have a password of *NONE, and text 'Created by Remote SpoolPrint/3X'.

If Remote SpoolPrint3X/400 creates the user profile, the Delete User Profile field will determine if the created user profile is to be deleted. Deleting the user profile will not affect the transmitted spool entry.

Note: The Dft User Profile and Delete User Profile fields are specified on the Target System/38 or AS/400 (the system which the output is to be printed). If output is transferred through intermediate System/38 or AS/400 machines, the fields must be set on those machines as well. (Most other Remote SpoolPrint3X/400 parameters are specified on the source system.)

AS/400 Security Userid/Password

Specifies the User profile and Password the source system will send to the target AS/400 when communications is established. For more information, see Appendix E, "AS/400 Security Considerations"

*NONE: No Userid or password is sent.

*USER: User profile QSYSOPR, and the AVI (Already Verified Indicator) are sent.

User Exit Pgm 2 (AS/400 only)

Specifies if Remote SpoolPrint is to call a user written program.

Remote Writers sending to an MVS system will optionally call a user written program BRSPLEXIT2 in lib BRODERICK prior to sending each spool entry. The exit program can perform the following two tasks: Alter spool attributes (including MVS Destination Name) and specify a Translate Table. The following parameters are passed to program BRSPLEXIT2:

<u>Num</u>	<u>Description</u>	<u>Type</u>	<u>Length</u>
1	Remote Writer Name	Character	10
2	Spool Filer Attributes	Character	512
3	Do the Translate (Y/N)	Character	1
4	Translate Table	Character	256

The translate option will translate each data record sent to the remote system, using the table supplied in parameter 4. The Translate Table will be initialized to 256 hex zeros (H'00') by the Remote Writer at startup. To translate data, build the Translate Table in parameter 4 and place a 'Y' in parameter 3. To build the translate table, place the desired value for each hex value at the corresponding offset in the table. For example, if you want to change each X'01' in the data to X'40', place the value X'40' at position 1 in the Translate Table. Position 2 in the table corresponds to X'02', position 3 corresponds to X'03', etc.

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Position 256 in the table corresponds to X'00'. An example Translate Table which translates lower case characters to upper case is provided in data area BRSPLUCXL. An example exit program 2, which loads this translate table is provided in source file BRSPL38SRC.

BDS Access User ID and Password

Specifies the user ID and password needed to access the BDS Software Server. Contact BDS Administration for your user ID and password.

Remote SpoolPrint Logging

Remote SpoolPrint (S/36, AS/400 only) has the ability to write a record for each transferred spool entry into a file called the Remote SpoolPrint Log. Options allow the Administrator to specify if Incoming and/or Outgoing spool entries are to be logged, and which Remote Writers to log. To Specify Logging, display the Tailoring Options screen by entering the following:

AS/400 BRSPLSETUP
S/36 RSCTRL

The following parameters define logging:

Log Outgoing Spool Entries:

Specifies if spool entries sent to another system will be logged.

*SELECT: Only Remote Writers which specify "Log Operations" *YES will log transferred spool entries.

*ALL: All Remote Writers will log transferred spool entries.

*NONE: No Remote Writers will log spool entries.

Log Incoming Spool Entries:

Specifies if spool entries sent from another system into this system will be logged.

*SELECT: Only entries sent by Remote Writers which are performing logging on the sending system will be logged.

*ALL: All incoming spool entries will be logged.

*NONE: No incoming spool entries will be logged.

Querying the Remote SpoolPrint Log

The contents of the Remote SpoolPrint Log can be accessed using two methods:

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- 1) Users can write queries against file BRODERICK/BRSPLOG on the AS/400 or BDS.RSLG on the S/36. This file is externally described and its fields can be displayed by issuing the following command:

DSPFFD BRODERICK/BRSPLOG

The file BRSPLOG has logical view BRSPLOG1 defined for it, which is keyed on date and time. Users can use either file, or create other logical files.

- 2) Users can use the DSPRSLOG command supplied by Remote SpoolPrint to query the log. If selected the following screen appears:

Display Remote SpoolPrint Log			
Display Specifications			
Enter values to limit the search:			
Start Date/Time: 19960322	000000	End Date/Time: 99999999	999999
Operation: *ALL		Sub-Operation: *ALL	
INBOUND/OUTBOUND: *ALL		Remote Writer: *ALL	
Sending:	Sys Name: *ALL	Outq: *ALL	*ALL
	Job: *ALL	User: *ALL	Num: *ALL
Receiving:	Sys Name: *ALL	Outq: *ALL	*ALL
	Job: *ALL	User: *ALL	Num: *ALL
	Spool Entry: *ALL	User: *ALL	Num: *ALL
		File: *ALL	FNum: *ALL
F3=Exit			

To narrow down the number of records displayed, enter values for one or more of the above fields and press ENTER. The following screen will appear:

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Display Remote SpoolPrint Log						
5=Display						
X	Date	Time	In/Out	Sub-Oper	Rmt Writer	SplJobNam SplFilNam
_	1994/04/18	11:36:10	INCOMING	RECEIVE	BPRT01	
_	1994/04/18	11:36:22	OUTGOING	STRRTWTR	R1	
_	1994/04/18	11:36:33	OUTGOING	SEND	R1	
_	1994/04/18	11:36:34	MONITOR	COMERR	R1	

F3=Exit

Place a '5' (display) next to desired entries or press ENTER to return to the Search display.

Managing the Remote SpoolPrint Log

The Administrator should periodically clear or save the Remote SpoolPrint log if logging is in effect. As mentioned above the Log data is placed into file BRSPLOG (AS/400) or BDS.RSLG (S/36). To clear the log enter the following command:

AS/400 CLRPFM BRODERICK/BRSPLOG

**S/36 DELETE BDS.RSLG,F1
SLIB BDSLIB
RSFBLD**

Unlocking System/36 Spool Entries

Remote SpoolPrint/36 places a lock on the spool entry while it is transmitting the entry to a remote system. The entry, when displayed using the D P command, appears with a 'C' next to the priority attribute, similar to when a COPYPRT command is using the entry. Normally the lock is removed when Remote SpoolPrint finishes using the spool entry. This prevents other tasks from altering the entry while it is being transmitted.

If for some reason the Remote Writer is canceled or ends abnormally while it has the spool entry locked, the entry must be unlocked manually. To unlock a locked spool entry, use the following procedure:

RSUNLOCK spool id

'spool id' specifies the spool entry (i.e. SP0001, SP0307) to be unlocked.

For example, to unlock spool id SP0005, use the following command:

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RSUNLOCK SP0005

Warning: Be careful not to unlock tasks which are being used by the COPYPRT command.

Remote SpoolPrint Server

The Remote SpoolPrint Server task processes incoming transfer requests for TCP400 Remote Writers on other systems. Access the Server Options screen by pressing F10:

Remote SpoolPrint/400	1/02/13
TCP Server Options	13:21:31
Server Port: <u>3550</u>	0=None, 1-65535
First Subport: <u>0</u>	0=None, 1-65535
Number of Subports: <u>0</u>	Number
Address/Name: _____	
<hr/>	
User ID/Password: <u>BDSUSER</u>	<u>BDSPASS</u> Name, *NONE
Secure Socket Layer: <u>N</u>	Y, N
System Store Name: <u>*SYSTEM</u>	
<hr/>	
System Store Password: _____	
Application ID: <u>*NONE</u>	
<hr/>	
Listen Backlog: <u>50</u>	1-2000
<hr/>	
CMD-3 Exit w/o Update	ENTER Update F10=ApplID

Server Port

Specifies the TCP port number the Remote SpoolPrint Server will listen on. Remote Writers sending to this system must specify this port number on their Server Port parameter. It is recommended to not specify a port in the range 1-1024; these ports are reserved for system functions.

To see a list of ports used by registered TCP servers on your system, use the IBM WRKSRVTBLE command. Select a number that is not already reserved by another server. Remote SpoolPrint will place an entry in this table with the following attributes:

Service: bds-rspl-tcp-server
Port: <your port>
Protocol: tcp
Text: BDS Remote SpoolPrint
Alias: *NONE

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First Subport and Number of Subports

Specifies, for compatibility with previous releases, the pool of TCP port numbers the Remote Writers will use to communicate with the Submitted Job on this system. Specify a first port and number of ports. As Remote Writers communicate with this machine, the Server will assign subports to them from this pool. Note that the Remote Writer can specify the subport to use for submitted jobs. Also note that current releases of Remote SpoolPrint no longer use subports. For more information refer to Appendix I, “TCP Considerations”.

Address/Name:

Specifies the IP Address or Host Name to listen on. Requests that come in on the specified Address/Name will be processed. If an IP address is specified, it must be in dotted decimal format (111.222.1.2). If a Host Name is specified, the AS/400 must be able to look up its IP address (using Host Name Table or DNS).

*ZERO: All addresses that the AS/400 is capable of processing will be listened to.

Userid/Password Parameter:

Specifies the User profile and Password the source system must send when TCP communications is established.

*NONE: No Userid or password is required.

Note: The User ID parameter does not need to match a user profile on the system.

Secure Socket Layer:

Specifies, for Remote Writers that do not define SSL, if the Secure Socket Layer (SSL) feature of TCP will be used. Specify Y or N.

Note: SSL requires additional setup on both the sending and receiving machines. Refer to Appendix I, “TCP Considerations” for more information.

System Store Name/Password:

Specifies, for SSL, the System store containing the Digital Certificate to use.

*SYSTEM: The default System Store contains the Digital Certificate.

Application ID:

Specifies, for SSL, the Application ID to use to specify the Digital Certificate.

*NONE: No Application ID is specified. The Digital Certificate to use is the default for the specified System Store.

Listen Backlog:

Specifies the number of incoming connection requests that can be queued up before the system starts rejecting them. Specify a number between 1 and 2000. Note that this number does not limit the number of

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connections that can be processed at a time; it limits the number that are waiting to be accepted and passed to a batch job by the server. Once the Server passes a connection to a submitted job, it accepts the next connection request.

Creating Application ID's

To allow Remote SpoolPrint to access a Digital Certificate, you may need to create an Application ID. This function is provided by Remote SpoolPrint from the Server Options display. You may also create and delete Application IDs using other methods if desired. Access the Application ID screen by pressing F10:

Remote SpoolPrint/400	1/02/13
Manage Application ID	13:21:31
Press F6 to add the following Application ID, F9 to delete:	
Prefix: BDS_BRODERICK_RSPL40_	
Application ID: <u>RMTWTR</u>	
Description: <u>Broderick Data Systems Remote SpoolPrint/400</u>	
F3=Exit F12=Exit	

Prefix:

To simplify the definition and edit process, Remote SpoolPrint automatically attaches this value to the front of the ID you specify.

Application ID:

Specify the value that (appended to the prefix) will be the Application ID to create or delete.

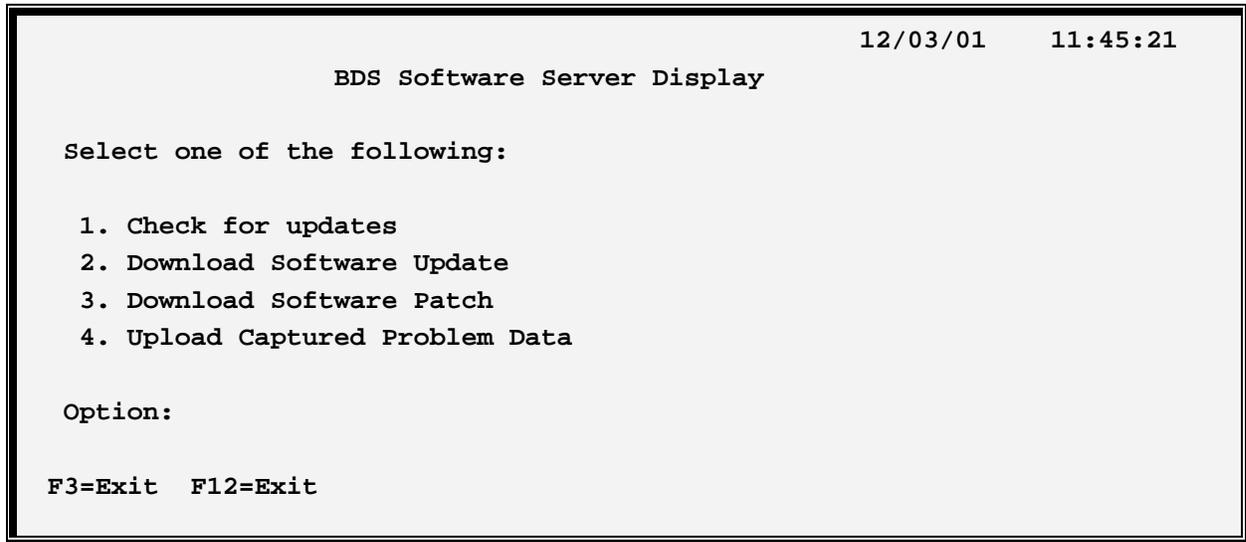
Description

Specify Descriptive text.

Access the BDS Software Server

If **F14** is chosen, the screen showing BDS Software Server options is displayed. To access the BDS Software Server the AS/400 must be connected to the Internet. The following display will appear:

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Some of the following options require a user ID and password. If you do not have one, contact BDS Administration. These options use the Internet to connect to a server at Broderick Data Systems. Therefore your AS/400 must be connected to the Internet. If behind a firewall, the firewall must allow outbound sessions through it.

Check for updates

Retrieves the latest available release of the product. Displays the BDS and OS/400 prerequisites releases required to install the latest release of the product.

Download Software Update

Downloads the latest release of the product into save files on your system. The update procedure can then be done using these save files. The product may be active and running while you perform this download.

Download Software Patch

Downloads objects into a save file on your system. Usually you will use this option while working with BDS tech support.

Upload Captured Problem Data

Uploads a save file on your system (containing objects that you have saved) into a save file on the BDS server. Usually you will use this option while working with BDS tech support.

F3 (Return)

Press F3 to exit.

F12 (Return)

Press F12 to exit.

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Rebuilding Damaged Data Queues

Remote SpoolPrint uses several data queues during its processing. OS/400 can damage data queues if it halts abruptly, for example during a power failure. The **RCTRSPLQ** (Recreate Remote SpoolPrint Data Queues) command will recreate non-Remote Writer data queues that are deleted or damaged. Refer to Chapter 4 “Maintaining Remote Writers”, section “Damaged Data Queues” to rebuild data queues associated with a Remote Writer. The user can use the **RCTRSPLQ** command to rebuild deleted/damaged queues. The following data queues can be recreated:

BRODERICK/BDSUSRPRF

For each data queue selected, the **RCTRSPLQ** command will do the following:

- Attempt to delete the data queue
- Recreate the data queue
- Change the owner to QSECOFR

Note: The administrator may choose to delete/restore the damaged data queue from a backup or from the Remote SpoolPrint media.

To rebuild data queues, end the function that has the problem or end all Remote SpoolPrint functions and subsystem BDS. From a command line, enter the **RCTRSPLQ** command and press **F4**. Select the queues to recreate by selecting *YES and press **ENTER**. Check the job log to make sure the queues are created properly.