DC Tips

... for the user

Resolving Intermittently Deleted LPD Print Jobs

Purpose

This document identifies and clarifies an issue with RFC 1179 compatibility where the Document Centre deletes print jobs without generating an error message. Background information and a resolution to the problem are also provided. This document is intended for system administrators with knowledge of TCP/IP printing and the LPD protocol.

Symptoms

Print jobs sent to the Document Centre do not register in the queue. A network sniff reveals that the print job arrives at the printer where it is deleted without generating an error message.

Background

When an LPD server translates jobs to a lp printer without spooling, print problems may occasionally occur. This typically occurs when using OSI translation devices or devices that translate print streams from host mainframe environments to client/server environments. When checking a network sniff of a connection, you may find zero bytes reported as the size of the data file the printer receives.

LPD Protocol and Receive Job Sub-Commands

The Document Centre currently supports RFC 1179 implementation of the LPD protocol. For a more complete understanding of the protocol standard, refer to the published document or view the RFC Internet Archives at http://www.faqs.org/rfcs/.

RFC 1179 includes provisions for delivering the print file by sending distinct commands contained in separate portions of a print session.

The directions to print the file are delivered in a package called the Control File. The file to print is delivered in a package called the Data File.

This document applies to these Xerox products:

x	DC 555/545/535
x	DC 490/480/470/460 ST
x	DC 440/432/425/420 ST
x	DC 340/332 ST
x	DC 265/255/240 ST/LP
x	DC 230/220 ST/LP
x	DCCS 50

"Receive Control File" Command

Several elements must exist in the control file. The "Receive Control File" command must have parameters defined before a print event occurs. These elements and parameters include the following:

- Control file parameters
- Number of bytes in the control file
- Data file name
- Host name
- User name
- At least one print job sub-command

"Receive Data File" Command

Several elements must exist as parameters in the "Receive Data File" command to allow the data file to print. These elements include the following:

- Data file name
- Number of bytes in the data file

The RFC implies two separate implementations of the "Receive Data File" command. The Document Centre supports either implementation of the sub-command.

The LPD client may do one of the following:

- Deliver the number of bytes in the data file
- Report the number of bytes in the data file as zero

If the LPD client accurately reports the number of bytes in the data file, the LPD server on the Document Centre accepts the data file and control file in any order.

If the LPD client delivers the number of bytes in the date file as zero, the LPD client MUST deliver the control file first, and the data file second. The LPD server on the Document Centre then parses the subcommands and determines the size of the data file based on the subsequent bytes received in that TCP session.

RFC 1179, Line Printer Daemon Protocol, Section 6, explains the manner in which LPD servers may handle job requests:

6. Receive job subcommands

These commands are processed when the line printer daemon has been given the receive job command. The daemon will continue to process commands until the connection is closed.

After a subcommand is sent, the client must wait for an acknowledgement from the daemon. A positive acknowledgement is an octet of zero bits. A negative acknowledgement is an octet of any other pattern.

LPR clients SHOULD be able to sent (sic) the receive data file and receive control file subcommands in either order. LPR servers MUST be able to receive the control file subcommand first and SHOULD be able to receive the data file subcommand first.

Subsection 6.3 describes the handling and format for the "Receive Data File" command:

6.3 03 - Receive data file

```
+----+-------+----+------+----+
| 03 | Count | SP | Name | LF |
+----+-------+----+------+----+
```

Command code - 3

Operand 1 - Number of bytes in data file

Operand 2 - Name of data file

The data file may contain any 8 bit values at all. The total number of bytes in the stream may be sent as the first operand, otherwise the field should be cleared to 0. The name of the data file should start with ASCII "dfA". This should be followed by a three digit job number. The job number should be followed by the host name which has constructed the data file. Interpretation of the contents of the data file is determined by the contents of the corresponding control file. If a data file length has been specified, the next "Operand 1" octets over the same TCP connection are the intended contents of the data file. In this case, once all of the contents have been delivered, an octet of zero bits is sent as an indication that the file being sent is complete. A second level of acknowledgement processing must occur at this point.

Resolution

- Ensure that the print session contains the Control File first, then the Data File.

- Make sure the Document Centre is running ESS 1.12.39 or later. If not, contact customer support to obtain the latest ESS.

Additional Information

Xerox's Document Centre Technical Support Operations welcomes feedback on all DC Tips documentation—send feedback via e-mail to: dssc_doc_feedback@usa.xerox.com.

Other DC Tips are available at
http://www.xerox.com/go/xrx/products/PT_4.jsp?family=Document+Centre+Family&view=tips.

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