Customer Tips

… for the user

Printing from VMS/OpenVMS

Purpose

This document provides requirements and procedures to enable printing from a VMS/OpenVMS (VAX or Alpha) system to a Xerox multifunction device. It also provides a procedure for removing "stair stepping" when printing ASCII documents and describes some third party products to use for VMS printing.

Procedure for Creating a Print Queue

Before creating a print queue, run *TCP/IP Services for OpenVMS* on your host. If you need to start it, use the command:
$ **@SYS$STARTUP:TCPIP$STARTUP**

The following commands create both a host name and a print queue called XEROX for a multifunction device with an ip address of:

13.234.167.189

VMS system responses are shown in *italics*.

1. Use a command similar to the one shown below, to identify the multifunction devices's hostname:
    ```
    $ UCX SHOW HOSTS 13.234.167.189
       Local database
    Host address    Host name
    13.234.167.189 XEROX
    ```
2. If the above command does not show a host name, use the following command to create a new host name:
    ```
    $ TCPIP SET HOST/ADDRESS=13.234.167.189
      _Host name: XEROX
    ```
3. Test the host name using the PING command at the TCPIP prompt:
    ```
    $ TCPIP
    TCPIP> PING XEROX

    ----- XEROX PING STATISTICS ------
    4 packets transmitted, 4 packets received, 0% packet loss

    TCPIP> EXIT
    $
    ```

This document applies to these Xerox products:

x	WC Pro 32/40
x	WC Pro 65/75/90
x	WC Pro 35/45/55
x	WC M35/M45/M55
x	DC 555/545/535 ST
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
	DCCS 50

4. Enter the command to run the LPR setup utility. Responses are case-sensitive. Press the Enter key to accept default values, shown as **(default)**.

```
$ RUN SYS$SYSTEM:TCPIP$LPRSETUP.EXE
```

Command < add delete view help exit >: **add**
Enter printer name to add: **XEROX**
Enter the FULL name of one of the following printer types:
remote local: **remote**
Enter printer synonym: **xerox**
Enter printer synonym: **(default)**
Enter full file specification for spool directory
 SPOOLER DIRECTORY 'sd':[SYS$SPECIFIC:[TCPIP$LPD.XEROX]]? **(default)**
Set LPD PrintServer extensions flag 'ps' []? **(default)**
Set remote system name 'rm' []? **XEROX**
Set remote system printer name 'rp' []? **lp**
Set printer error log file 'lf'
[SYS$SPECIFIC:[TCPIP$LPD]XEROX.LOG]? **(default)**
Enter symbol name: **q**
Are these the final values for printer XEROX? [y] **y**
Do you want to add comments to the printcap file [n]? **n**
Do you want the queue to default to print flag pages [y]: **y**
Do you want this procedure to start the queue [y]: **y**
Command < add delete view help exit > **exit**

5. When complete, examine the queue status and test the queue by printing the Welcome.txt file to the multifunction device, as in the following examples. The first example shows the status of a print queue named XEROX and the next shows a test print to it.

```
$ SHOW QUEUE XEROX
```

Server queue XEROX, idle, on 1A::, mounted form DEFAULT

```
$ PRINT WELCOME.TXT /QUEUE=XEROX
```

Job WELCOME (queue XEROX, entry 1) started on XEROX

NOTE: If only one line of the text prints out, follow the steps in the section titled "Eliminating Stairstepping Text," later in this document.

If the Queue Manager does not Start

If you receive the following message: "TCP/IP-E-QMANNOTRUN, queue manager is not running," use the following command to start it:

```
$ START QUEUE/MANAGER
```

Now, if you get the message: "JBC-E-QMANNOTSTARTED, queue manager could not be started," or "JBC-E-OPENERR, error opening SYS$COMMON:[SYSEXE]QMAN$MASTER.DAT," you may find these commands useful:

```
$ START SYS$PRINT
$ ENABLE AUTOSTART/QUEUES
$ STOP/QUEUE/MANAGER
$ START/QUEUE/MANAGER
$ SHOW QUEUE/FULL
$ @SYS$MANAGER:TCPIP$LPD_SHUTDOWN.COM
        $ @SYS$MANAGER:TCPIP$LPD_STARTUP.COM
```

Eliminating "Stairstepping" Text

You may find it necessary to eliminate "stairstepping text," single line printing, inappropriate PostScript errors, or other problems caused when printing raw VMS ascii files. A simple method to format an ascii text file uses TELNETSYM print symbiont.

1. Create and test an LPD print queue as described in the previous section. The following command creates a TELNETSYM "relay queue" which formats the ascii text and sends it to the original print queue for spooling to the Document Centre.

   NOTE: When entering the command shown, the dashes at the end of a line indicate that the command continues on the next line.

   ```
   $ INITIALIZE /QUEUE /ON="TCPIP$QUEUE:XEROX" -
   _$ /PROCESS=TCPIP$TELNETSYM -
   _$ /DEVICE=PRINTER RELAY_XEROX

   $ START RELAY_XEROX
   ```

2. Test the print queue after you create it. A convenient file to use for testing is Welcome.txt, a small ascii text file which is present in all VMS installations. Use the following command to print to the queue XEROX:

   ```
   $ PRINT WELCOME.TXT /QUEUE=RELAY_XEROX
   ```

For further information or theory about TELNETSYM printing, refer to the *Digital TCP/IP Service For OpenVMS Management Guide* from Compaq.

Third-Party TCPIP Software for VMS

Printkit

The PrintKit Network Printing Interface software from Northlake provides printing services from OpenVMS systems to PostScript and PCL printers with TCP/IP, LAT, and serial communications. It is a complete replacement for DECPrint, a technology which supported older printers. Northlake has tested this software with Xerox Document Centres. For details, visit Northlake's Web site:

http://www.nls.com/products/products.html?con=/xerox/xerox_content.html

The following paragraphs contain a brief summary of the information on Northlake's Web site.

Xerox Document Centre 220/230/332/340

The DC 220/230/332/340 printers can use the base PrintKit Network Printing Interface software (L307-9-L9 Single Printer Kit).

Xerox Document Centre 240/255/265

The DC 240/255/265 printers require Production Printer PrintKit software; use with the base PrintKit software (above) is not supported (use L308-9-LR Restricted Printer Kit: one printer, model restrictions apply).

PrintKit software products provide OpenVMS printing to networked printers, including desktop, workgroup, departmental, production, and color models. You can "mix and match" printers from your choice of vendors (alongside your existing printers), retain compatibility across the entire configuration, and still change as your requirements evolve. The PrintKit software consists of a print symbiont that is integrated with the OpenVMS printing services, and an accompanying management utility.

PrintKit provides compatible OpenVMS printing services. It matches the DECprint user and application interfaces, including the full parameter set and ANSI-PPL3 (LN03) emulation. Where PrintKit extends the DECprint model, the new features are consistent with the ISO 10175 (Document Printing Application) standard on which the DECprint interface is based.

Configuration of the PrintKit software is managed by an interactive administration utility, KITCP.

KITCP allows you to define, modify, and display queue configurations. To make this task easier, configuration information is preloaded for each printer model. A typical queue configuration requires that you select the queue name, and the printer's address and model - the software determines details such as communications requirements and printer features from its configuration database.

KITCP provides similar capabilities for managing job specifications (document format, media selection, imposition specifications). Advance definition of job specifications simplifies the printing process and makes it more reliable.

MultiNet

Process Software Corp. developed the MultiNet and TCPWare products which provide TCP/IP for VMS. Use MultiNet to create a print queue that spools print jobs to a Xerox multifunction device. First, issue the following command to run the printer queue configuration manager:

```
$ MULTINET CONFIGURE/PRINTER
```

For the initial configuration of an LPD queue, use the PRINTER-CONFIG ADD command. The utility prompts you for the following information:

```
Prompt                         Description
```
Queue Name: A name you assign to the queue
Destination IP Address: The IP address of printer
Protocol Type: [LPD]   Press Return to accept the default, LPD
Remote Queue Name: [lp]   Press Return to accept the default, lp

The following example shows the initial configuration for a queue called DC230:

```
$ MULTINET CONFIGURE/PRINTER

MultiNet Remote Printer Configuration Utility 3.4(20)

[Reading in configuration from MULTINET:REMOTE-PRINTER-
QUEUES.COM]

PRINTER-CONFIG>ADD DC230

[Adding new configuration entry for queue "DC230"]

Destination IP Address: 161.49.2.3

Protocol Type: [LPD] <Return>

Remote Queue Name: [lp] <Return>

[DC230 => 161.44.192.5, lp]

PRINTER-CONFIG>SHOW DC230

Queue Name      IP Destination      Remote Queue Name

----------      --------------      -----------------

DC230            161.49.2.3          lp

PRINTER-CONFIG>EXIT

[Writing configuration to MULTINET:REMOTE-PRINTER-QUEUES.COM]
Invoke the MULTINET:REMOTE_PRINTER_QUEUES.COM command procedure
to initialize the printer queue.
```

For more information, please consult the admin guides available on the Process Software Corp. Web site.

The following excerpt from the admin guide may be useful for adding a device control library to fix "stairstepping" text problems, blank pages, or to provide formatting (for example, landscape or duplex printing).

Adding Print Queue Parameters

You can define queue parameters on each MultiNet queue using the MULTINET CONFIGURE/PRINTER utility. Refer to the admin guide for specific parameters.
The following example shows how to add a device control library called HP3SI to the queue called DC230.

```
$ MULTINET CONFIGURE/PRINTER

MultiNet Remote Printer Configuration Utility 4.2(20)

[Reading in configuration from MULTINET:REMOTE-PRINTER-
QUEUES.COM]

PRINTER-CONFIG>SELECT DC230

[The Selected Printer is now DC230]

PRINTER-CONFIG>SET LIBRARY HP3SI

[Library HP3SI]

PRINTER-CONFIG>SHOW DC230

Queue Name        IP Destination       Remote Queue Name

----------        --------------       -----------------

DC230              161.49.2.3           lp

Device Control Library = HP3SI

PRINTER-CONFIG>EXIT

[Writing configuration to MULTINET:REMOTE-PRINTER-QUEUES.COM]
```

Remember to invoke the REMOTE-PRINTER-QUEUES.COM procedure after exiting the configuration utility to add the parameters to the queue. Some parameters are only valid with the INITIALIZE/QUEUE command, so you may need to first stop and delete the queue, then invoke the REMOTE-PRINTER-QUEUE command procedure before the new parameters take effect.

Details of Printing Options, for Example, Landscape Printing

The HP Device Control table in SYS$LIBRARY contains the text for HP landscape. To extract landscape:

```
library/extract=(landscape)landscape/output=land.txt
hplasedevctl.tbl
```

In the land.txt file you should see the escape code for landscape printing: [esc]&l1O
When you wish to use this feature, specify landscape in the print command.

For information on printer features invoked using PCL commands, please reference the PDL Reference Guide for your printer model, available on our Web site:
www.xerox.com/documentcentrefamily/tips

Additional Information

SOURCE: Compaq Computer Corporation (document number C000629-2589) *[TCPIP] How to Setup an Outbound LPD Client Queue on TCPIP.*

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Verified and tested 9/26/00 by Karen Mackey, IBM Consultant.

Added library information to MultiNet setup 10/12/00: R. Olivier.

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Xerox Customer Service welcomes feedback on all documentation - send feedback via e-mail to: USA.DSSC.Doc.Feedback@mc.usa.xerox.com.

You can reach Xerox Customer Support at 1-800-821-2797 (USA), TTY 1-800-855-2880 or at http://www.xerox.com.

Other Tips about Xerox multifunction devices are available at the following URL: http://www.xerox.com/DocumentCentreFamily/Tips.

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