
Xerox Document Services Platform

Using the Ip Utilities for Solaris

**THE DOCUMENT COMPANY
XEROX**

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Introduction

Using the lp Utilities for Solaris provides you with the enhanced options for submitting a document to a Xerox printer using the lp utilities on a workstation running Solaris 2.x software.

About this guide

Before you perform any procedures in this guide, you should become familiar with its contents and conventions.

You should know how to create a document in a software application on your workstation and should be familiar with the options available to you for printing.

You should also know what type of Xerox printer is available to you and what print options are available with that printer.

Contents

The following list describes the contents of this guide:

- Chapter 1, "Installation," describes the procedures for configuration of the lp utility.
- Chapter 2, "Using the lp utilities," describes the syntax and the enhanced options available for the lp utilities.
- Chapter 3, "Print queue status," describes how to obtain the status of a selected print queue.
- Chapter 4, "Remove a print job from the queue," describes how to remove a print job from the selected queue.

Conventions

This guide uses the following conventions:

- All caps and angle brackets—Within procedures, the names of keys are shown in all caps within angle brackets (for example, press <RETURN>).
- Angle brackets—Variable information, or the position of a specified argument in the command syntax, appears in angle brackets (for example, List Fonts <Pattern>).
- **Bold**—Within procedures, text and numbers that you enter are shown in bold (for example, enter **boot**).
- Enter—Within procedures, the two-step process of keying in data and pressing <RETURN> (for example, enter **y**).
- Italics—Document and library names are shown in italics (for example, the *Xerox Document Services Platform Series System Guide*).
- Square brackets—Names of options you select are shown in square brackets (for example, Select **[Exit]**).
- Quotes—Keywords you can enter as arguments appear in quotes (for example, "USLetter").
- Vertical bars—Alternatives to specified arguments are separated by vertical bars (for example, -pdl <ps | hppcl | ascii | tiff>).

NOTE: Notes contain important supplemental information pertaining to the task that you should read.

CAUTION

Cautions alert you to an action that could damage hardware, software, or your data.

WARNING

Warnings alert you to conditions that may affect the safety of people.

Related Xerox Document Services Platform (DocuSP) documentation

Using the lpr Utilities for DOS and Unix

Using the lp Utilities for Solaris

Using the Xerox Client Software for Solaris

Preparing and printing PDF files

System Guide

Any documentation delivered with the Xerox printer.

Additional client documentation

Xerox Production Print Services Guide to Job Submission for Windows

Xerox Production Print Services Guide to Job Submission for Macintosh

Xerox Production Print Services Guide to Job Submission using XDS Plus

Xerox Document Services Platform Guide to using the DocuSP Web Interface

1. Installation

This chapter describes the procedures for configuration of the client workstation and the DocuSP controller to enable native lp printing.

Native lp printing protocol for Sun Solaris 2.3 and higher

Workstation requirements

The workstation must meet the following hardware and software requirements:

Hardware requirements

- Sun workstation

Software requirements

- Solaris 2.3 or higher

Installation

NOTE: Refer to the on-line man pages for additional information about the Unix commands used in the following procedure.

To configure the client workstation, perform the following steps:

1. Obtain the list of DocuSP controller queues that will be accessed from this client workstation.
2. Log in as root at the client workstation.

NOTE: The following examples use the name proofqueue as the name of the print queue and the name printsrv as the hostname of the DocuSP controller. These should be replaced by the hostname of the DocuSP controller and the name of a print queue that exists in your installation.

3. In a command tool window, enter **admintool&**
4. The Administration tool is displayed.
5. Access the Host dialog and add a new Host.
6. Fill in the Host Name, IP Address, and, if necessary, the Ethernet Address text fields. Use the worksheets in the *Getting Ready for the DocuSP Installation* to determine the correct values for this client workstation.
7. Access the Printers dialog and add access to a remote printer.
8. Fill in the Printer Name text field with the name of the queue that will be used by lp.
9. Fill in the Printer Server text field with the name of the DocuSP controller name.

NOTE: You can add an optional comment in the Comment or Description field at this time.

10. For Solaris 2.4 and earlier, select **[System V]** for the Print Server OS entry.
11. Select to set the DocuTech printer as the default printer for lp on this workstation.
12. Select **[Add]** or **[OK]**. Access to the printer is enabled.
13. Quit the Administration tool.
14. Verify connectivity to the DocuSP controller by entering the following command:

ping printsrv

If your machine can see the DocuSP controller from the net you will see:

```
printsrv is alive
```

15. Repeat the steps to add a printer for each additional queue.

Using lp with Solaris 2.6

Sun Microsystems has discontinued support for the System V Print Protocol in Solaris 2.6. In order to use the lp utilities to print to the DocuSP controller running Solaris 2.6, perform the following procedures, depending upon the level of Solaris on the client workstation.

On a Solaris 2.6 client

The `-o` options are ignored when using lp on a Solaris 2.6 client to submit jobs to the controller. To correct this, perform the following at the client workstation:

1. Open a terminal window and log on as root.
2. Enter the following:

```
lpset -a bsdaddr=<controller name>,<queue name>,Solaris <queue name>
```

NOTE: Syntax is critical. There are spaces after the `-a` and after Solaris; there are not spaces after the commas.

3. If root access is unavailable on the client, modify the `.printers` file in the home directory. Enter the following:

```
<alias> <DocuSP Controller Name>:<DocuSP Queue Name>:Solaris
```

NOTE: There is a space between <alias> and <DocuSP Controller Name>.

4. If the `.printers` file does not exist on the client workstation, create one by typing the following in a terminal window:

```
vi .printers
<alias> <DocuSP Controller Name>:<DocuSP Queue Name>:Solaris
:wq!
```

On a Solaris 2.5.1 or earlier client

The `-o` options are ignored when using `lp` on a Solaris 2.5.1 or earlier client and submitting jobs to the controller. To correct this, perform the following on the client workstation:

1. Open a command tool and enter the following:

```
lpsystem -l
```

This will list all the remote printers and the associated `lp` properties that have been created on the Solaris 2.5.1 client workstation. The following is an example:

System:	polaris
Type:	bsd
Connection timeout:	never
Retry failed connections:	after 10 minutes
Comment:	allow all connections

The entry after `System` denotes the name of the remote printer, which should represent the controller name. If the `Type` identified for the remote printer is set to **bsd**, then the remote printer is configured correctly and will print successfully to the printer controller once the **svr4–extensions** entry has been added to the `/etc/lp/Systems` file (detailed below).

NOTE: When creating a remote printer using the Solaris Admintool Utility on a Solaris 2.5.1 client, all printers by default are bsd.

If the type is set to **s5**, you will not be able to print from your Solaris 2.5.1 client to the controller since Solaris 2.6 no longer supports the System V print protocol. The `Type` will need to be changed to `bsd`. To make this change, do the following:

1. In a command tool window, enter the following:

```
lpsystem -t bsd <controller name>
```

2. Locate the `/etc/lp/Systems` file.
3. Edit the remote printer entry for the controller in the `Systems` file. The following is an example of an old entry in the `Systems` file:

```
<controller name>:x:-:bsd:-:n:10:-:-:
```

Using a text editor, change the entry to the following:

```
<controller name>:x:-:bsd:-:n:10:svr4-  
extensions:-:
```

4. Enter the following in the Command Tool:

lpshut

This will shut down the lp print service on the DocuSP controller.

5. Then restart the lp print service by entering the following:

```
/usr/lib/lpsched
```

Verify installation

To test this setup at the client, perform the following steps:

1. Log in as a non-root user. The following examples use cdoc as the user account name.
2. Check the status of the queues to verify that queuing and printing are enabled. This can be done using the following command:

```
lpstat -a proofqueue
```

Information similar to the following is displayed:

```
proofqueue accepting requests since Tue May 16  
12:53:14 EDT 1995
```

3. Submit a job by entering the following command:

```
lp -d proofqueue /etc/hosts
```

4. Enter the following command to verify that the print job reached the queue:

```
lpstat -u cdoc
```

Replace cdoc in the above example with the user account name that was used to submit the print job. Information similar to the following is displayed:

```
proofqueue-80
```

```
cdoc 56638 Jul 22 14:35
```

2. Using the lp utilities

The lp command is used to send a document file to the Xerox printer.

Printing hierarchy

When submitting documents to the printer, keep in mind the following hierarchy to achieve the desired results:

1. Queue overrides
2. Exception pages
3. Job ticket settings
4. Submission print protocol (lp, lpr, nprint)
5. Setpagedevice values/PCL copy count
6. Queue defaults

For example, queue defaults are overridden by job ticket settings, but job ticket settings are not overridden by lp commands.

The lp command syntax and options

This section gives the syntax for the lp command, and lists the required and optional information you use to submit a print job.

Syntax `lp -d <queue name> <options> <filenames>`

Required Information

`-d <queue name>`

Identify the queue where you want to send the jobs.

`<filenames>`

Specify the names of the files to print. You must include any filename extension when you type the filename. Using the wildcard (*) character is not recommended.

Using lp with Solaris 2.6

Sun Microsystems has discontinued support for the System V Print Protocol in Solaris 2.6. In order to use the lp utilities to print to the DocuSP controller running Solaris 2.6, refer to the chapter, *Installation*, for procedures to set up lp submission from a client workstation.

NOTE: When using lp on the DocuSP controller for local print submission, the -c switch must be included. The syntax required is:

`lp -d <queue name> -c -o <options> <job name>`

Using the lp options

In addition to the required information, you can use the options listed in this section to specify the print characteristics of the document. Some options may not be appropriate for every printer; for example, some printers do not perform binding or cannot accept precut tabs.

If more than one option is set using `-o`, the options must be enclosed in double quotes and separated by a space. The extended print options are case-sensitive.

When you enter the optional text after the print options, shown in angle brackets below, the text string must not contain any spaces. If you enter text that contains spaces, enclose the text with the carat character (^).

NOTE: In addition to the extended options described in this guide, the standard lp options are also available. Refer to the man pages for lp for more information.

Account number

`-o account=<text>`

Enter an account number for the job.

Banner message

`-o banner=<text>`

Type the message, up to a maximum of 100 characters. Any message entered will be displayed on the banner page when the job is printed.

Covers

`-o frontcover=<imaging:size:type:color:weight>`

`-o backcover=<imaging:size:type:color:weight>`

Specify the covers, front or back or both, to be printed with the document. The imaging parameter options are: inside, outside, both, or none. The media size, type, color, and weight parameters are the same as the paper stock options defined later in this section.

For example, to specify to print side one (outside) of the front cover on blue cardstock, enter:

```
lp -d ps1 -o frontcover=outside:  
USLetter:Plain:blue:163 test.ps
```

Document name

-t <document name>

Replace the name of the specified file.

Finishing options - bind

-o bind=<left | right>

Bind the document after it is printed. To use this option, the selected printer must have a binder installed and enabled.

Finishing options - stitch

-o staple | stitch=<option>

Staple the document after it is printed. You can enter “stitch” or “staple” to indicate that the document is to be stapled. “Staple” is equivalent to stitch = singlePortrait.

The stitch option allows you to select the location of the stitch or staple. The available options are: singlePortrait, singleLandscape, dualLandscape, dualPortrait, rightSinglePortrait, rightSingleLandscape, or rightDualLandscape. The staple option default to a single portrait stitch if no option is given. To use this option, the selected printer must have a stitcher or stapler.

Finishing options – other finishing devices

-o finishing=<device name>

Specify an attached finishing device. The device name must match the name defined by the System Administrator on the DocuSP controller. See the Print Service Operator for the list of defined device names.

Finishing options – no finishing

-o nofinishing

The no-finishing option would be used to override all finishing selections other than those provided by the overrides on the queue. Typically, this option would be used when reprinting a job.

Image shift – x

–o xshift=<#>

Specify the x (horizontal for portrait page) image shift in millimeters. The value of # must be a positive value greater than zero. The point of origin is the lower left corner of the portrait page.

–o xshift2=<#>

If your printing requirements include duplex or tumble duplex, you can select an independent horizontal image shift for both side 1 and side 2.

Image shift – y

–o yshift=<#>

Specify the y (vertical for portrait page) image shift in millimeters. The value of # must be a positive value greater than zero. The point of origin is the lower left corner of the portrait page.

–o yshift2=<#>

If your printing requirements include duplex or tumble duplex, you can select an independent vertical image shift for both sides 1 and sides 2.

Number of Copies

–n <number of copies>

Specify the number of copies to print of each file. If the number of copies is not specified, a default of "1" is applied and will override any copy count defined in the PDL.

Opacity

–o opacity=<transparency|opaque>

Specify if the job will be printed on transparent stock. If this option is not used, the default is opaque.

Pages to print

–o pagestoprint=<# #>

Specify the page range, from # to #, within the document to print.

Paper stock

`-o media=size:type<modulus>:color:weight`

Define the following options in order:

- Paper size = USLetter, USLegal, Tabloid, USLedger, USStatement, a0 through a10, isob0 through isob10, jisb0 through jisb10, or custom where a custom size is entered as width (x) and length (y) in either inches or millimeters. See the example below.
- Paper type = Plain, PlainDrilled, Drilled, PlainPreCutTab <modulus>, PreCutTab <modulus>, DrilledPreCutTab <modulus>, Transparency, DrilledTransparency, DrilledFullCutTab, FullCutTab, or a text string for a custom paper type. Modulus is optional for a custom paper type.

For ordered paper types, enter the modulus number. If no modulus is specified, the modulus will default to 1.

The modulus is the number of different items in a set, for example precut tabs or rainbow paper, before the set repeats. For example, a set of 5 precut tabs has a modulus of 5.

- Paper color = white, clear, yellow, pink, blue, green, or a text string excluding the colon and comma for a custom color. The caret character (^) is not required for a custom color string using spaces in this media option.
- Weight = paper weight in grams per square meter (gsm).

For example:

```
lp -d ps1 -o media=USLetter:PreCutTab
5:white:163
lp -d ps1 -o media=8 10:Plain:yellow:163
```

You may omit a value for any of these options by entering a colon (:) to separate the field, but leave the field value empty.

The following example shows how to specify the paper size and color and omit the other options:

```
lp -d ps1 -o media=a4::blue: test.ps
```

The following options allow you to specify just one option for the paper stock.

`-o mediaType=<type>`

Specify the media type. Type options are the same as the type options given above.

–o mediaSize=<size>

Specify the paper stock size. Size options are the same as the paper size options given above.

–o mediaColor=<color>

Specify the paper color. Color options are the same as the color options given above. If a custom color text string requires spaces, the string must be enclosed with the carat character (^).

–o mediaWeight=<weight>

Specify the paper stock weight in grams per square meter (gsm).

Paper stock size

–o <paper size>

Specify the paper stock size to be used for the job. The acceptable values are USLetter, USLegal, Tabloid, USLedger, USStatement, a0 through a10, isob0 through isob10, and jisb0 through jisb10.

PDL type

–o <pdl>

Specify the format of your document. Accepted values are ps for PostScript, pcl for HPPCL, pdf, ascii, or tiff.

This option is only necessary if you want to print your document in a PDL other than the one in which it was created.

Recipient name

–o recipient=<name>

Specify the name of the person to receive the job.

Reprint

–o reprint

Reprint a saved job. You may override the copy count of the saved job ticket. If the reprint command is sent by a user different from the user who originally saved the job, the sender name is overridden by the new sender. For example:

```
lp -d ps1 -o reprint -n 5 test.ps
```

Save

`-o print|save`

Save the specified job. Print is the default option and only needs to be specified if the job is being submitted to a save queue.

`-o savedest=<destination>`

Specify the save location of the job relative to the save location set at the DocuSP controller. For example, if the save location at the controller is `/home/savefiles` and the save location for the job should be `/home/savefiles/orilee`, then the command is:

```
lp -d ps1 -o save savedest=orilee test.ps
```

Sides printed

`-o <simplex|duplex|tumble>`

Specify simplex, duplex, or tumble duplex for the print job. The default is "simplex".

Tumble duplex printing causes a 180-degree rotation of alternating pages. Both sides of the page are printed but the position of the image is reversed (from top to bottom) on every other page.

NOTE: The use of tumble duplex is restricted by certain characteristics of the PostScript master. If you have difficulty using this option, contact your Xerox representative for assistance.

Slip sheets

`-o <slipsheet>`

Specify a slip sheet to be placed between the sets of your document. The slip sheet paper stock is set at the DocuSP controller.

Start message

`-o startmsg=<text>`

Type a message, up to a maximum of 100 characters. For example, you might type a message that specifies some unique job programming that must be provided by the printer operator. Be sure to advise the printer operator that the job contains a message.

Uncollated

–o uncollate

This option will print the job uncollated. The default is collated.

ASCII options for the lp command

The following options are valid for ASCII jobs only:

Font

–o font=

Specify the font to use. Any font installed on the DocuSP controller can be specified.

Font size

–o fontsize=<n>

Specify the font size in points.

Orientation

–o <orientation>

Specify the page orientation to use. Valid orientations are portrait, landscape, inverseportrait or ipportrait, and inverselandscape or ilandscape.

3. Print queue status

The lpstat command is used to show the contents of the printer queues.

The lpstat command syntax and options

Refer to the man pages for further information on other options available with the lpstat command.

Syntax lpstat -o <queue name> <options>

Required information -o <queue name>
Identify the print queue.

The option is case-sensitive; more than one option may be entered at one time.

User identification

-o <user id>
Report the status of all jobs with the specified user name.

4. Remove a print job from the queue

The cancel command removes a print job from the print queue.

The cancel command syntax and options

If no options are specified for the cancel command, the command will remove all active jobs with your user name.

Syntax cancel <options>

NOTE: The cancel command will only work with jobs that have not been sent to the printer.

The options

The options are case-sensitive; more than one option may be entered at a time.

Job identification

<job ID>

Remove the job with the specified job identification number.

Printer queue

<printer queue>

Remove all jobs from the given printer queue that belong to your user name.

User name

-u <user name>

Remove the job with the specified user name.

