NAME

lpadmin – configure the LP print service

SYNOPSIS

lpadmin –**p** *printer options*
lpadmin –**x** *dest*
lpadmin –**d** [*dest*]
lpadmin –**S** *print-wheel* –**A** *alert-type* [–**W** *minutes*] [–**Q** *requests*]
lpadmin –**M** –**f** *form-name* [–**a** [–**o filebreak**] [–**t** *tray-number*]]

AVAILABILITY

SUNWlpu

DESCRIPTION

lpadmin configures the LP print service by defining printers and devices. It is used to add and change printers, to remove printers from service, to set or change the system default destination, to define alerts for printer faults, and to mount print wheels.

OPTIONS

Adding or Changing a Printer

The first form of the **lpadmin** command (**lpadmin** –**p** *printer options*) is used to configure a new printer or to change the configuration of an existing printer. When creating a new printer, one of three options (–**v**, –**U**, or –**s**) must be supplied. In addition, only one of the following may be supplied: –**e**, –**i**, or –**m**; if none of these three options is supplied, the model standard is used. The –**h** and –**l** options are mutually exclusive. Printer and class names may be no longer than 14 characters and must consist entirely of the characters **A-Z**, **a-z**, **0-9**, dash (**-**) and underscore (**_**). If –**s** is specified, the following options are invalid: –**A**, –**e**, –**F**, –**h**, –**i**, –**l**, –**M**, –**m**, –**o**, –**U**, –**v**, and –**W**.

The following *printer options* may appear in any order.

–**A** *alert-type* [–**W** *minutes*]
The –**A** option is used to define an alert that informs the administrator when a printer fault is detected, and periodically thereafter, until the printer fault is cleared by the administrator. The *alert-types* are:

mail Send the alert message using mail (see **mail**(1)) to the administrator.

write Write the message to the terminal on which the administrator is logged in. If the administrator is logged in on several terminals, one is chosen arbitrarily.

quiet Do not send messages for the current condition. An administrator can use this option to temporarily stop receiving further messages about a known problem. Once the fault has been cleared and printing resumes, messages will again be sent when another fault occurs with the printer.

showfault
Attempt to execute a fault handler on each system that has a print job in the queue. The fault handler is **/etc/lp/alerts/printer**. It is invoked with three parameters: *printer_name*, *date*, *file_name*. The *file_name* is the name of a file containing the fault message.

none Do not send messages; any existing alert definition for the printer will be removed. No alert will be sent when the printer faults until a different alert-type (except **quiet**) is used.

shell-command
Run the *shell-command* each time the alert needs to be sent. The shell command should expect the message in standard input. If there are blank spaces embedded in the command, enclose the command in quotes. Note that the **mail** and **write** values for this option are equivalent to the values **mail** *user-name* and **write** *user-name* respectively, where *user-name* is the current name for the administrator. This will be the login name of the person submitting this command unless he or she has used the **su** command to change to another user ID. If the **su** command has been used to change the user ID, then the *user-name* for the new ID is used.

list Display the type of the alert for the printer fault. No change is made to the alert.

The message sent appears as follows:

> **The printer** *printer* **has stopped printing for the reason given below. Fix the problem and bring the printer back on line. Printing has stopped, but will be restarted in a few minutes; issue an enable command if you want to restart sooner. Unless someone issues a change request**
>
> **lp –i** *request-id* **–P ...**
>
> **to change the page list to print, the current request will be reprinted from the beginning.**
>
> **The reason(s) it stopped (multiple reasons indicate reprinted attempts):**
>
> *reason*

The LP print service can detect printer faults only through an adequate fast filter and only when the standard interface program or a suitable customized interface program is used. Furthermore, the level of recovery after a fault depends on the capabilities of the filter.

If the *printer* is **all**, the alerting defined in this command applies to all existing printers.

If the –**W** option is not used to arrange fault alerting for *printer*, the default procedure is to mail one message to the administrator of *printer* per fault. This is equivalent to specifying –**W once** or –**W 0**. If *minutes* is a number greater than zero, an alert will be sent at intervals specified by *minutes*.

–c *class*
Insert *printer* into the specified *class*. *class* will be created if it does not already exist.

–D *comment*
Save this *comment* for display whenever a user asks for a full description of *printer* (see **lpstat**(1)). The LP print service does not interpret this comment.

–e *printer*$_1$
Copy the interface program of an existing *printer*$_1$ to be the interface program for

printer. (Options –**i** and –**m** may not be specified with this option.)

–**F** *fault-recovery*

This option specifies the recovery to be used for any print request that is stopped because of a printer fault, according to the value of *fault-recovery*:

continue Continue printing on the top of the page where printing stopped. This requires a filter to wait for the fault to clear before automatically continuing.

beginning Start printing the request again from the beginning.

wait Disable printing on *printer* and wait for the administrator or a user to enable printing again.

During the wait, the administrator or the user who submitted the stopped print request can issue a change request that specifies where printing should resume. (See the –**i** option of the **lp** command.) If no change request is made before printing is enabled, printing resumes at the top of the page where stopped, if the filter allows; otherwise, the request is printed from the beginning.

–**f allow:***form-list*

–**f deny:***form-list*

Allow or deny the forms in *form-list* to be printed on *printer*. By default no forms are allowed on a new printer.

For each printer, the LP print service keeps two lists of forms: an ''allow-list'' of forms that may be used with the printer, and a ''deny-list'' of forms that may not be used with the printer. With the –**f allow** option, the forms listed are added to the allow-list and removed from the deny-list. With the –**f deny** option, the forms listed are added to the deny-list and removed from the allow-list.

If the allow-list is not empty, only the forms in the list may be used on the printer, regardless of the contents of the deny-list. If the allow-list is empty, but the deny-list is not, the forms in the deny-list may not be used with the printer. All forms can be excluded from a printer by specifying –**f deny:all**. All forms can be used on a printer (provided the printer can handle all the characteristics of each form) by specifying –**f allow:all**.

The LP print service uses this information as a set of guidelines for determining where a form can be mounted. Administrators, however, are not restricted from mounting a form on any printer. If mounting a form on a particular printer is in disagreement with the information in the allow-list or deny-list, the administrator is warned but the mount is accepted. Nonetheless, if a user attempts to issue a print or change request for a form and printer combination that is in disagreement with the information, the request is accepted only if the form is currently mounted on the printer. If the form is later unmounted before the request can print, the request is canceled and the user is notified by mail.

If the administrator tries to specify a form as acceptable for use on a printer that doesn't have the capabilities needed by the form, the command is rejected.

Note the other use of **−f**, with the **−M** option, below.

The **−T** option must be invoked first with **lpadmin** to identify the printer type before the **−f** option can be used.

−h Indicate that the device associated with the printer is hardwired. If neither of the mutually exclusive options, **−h** and **−l**, is specified, **−h** is assumed.

−I *content-type-list*
Allow *printer* to handle print requests with the content types listed in a *content-type-list*. If the list includes names of more than one type, the names must be separated by commas or blank spaces. (If they are separated by blank spaces, the entire list must be enclosed in double quotes.)

The type **simple** is recognized as the default content type for files in the UNIX system. A **simple** type of file is a data stream containing only printable ASCII characters and the following control characters.

Control Character	Octal Value	Meaning
backspace	10_8	move back one character, except at beginning of line
tab	11_8	move to next tab stop
linefeed (newline)	12_8	move to beginning of next line
form feed	14_8	move to beginning of next page
carriage return	15_8	move to beginning of current line

To prevent the print service from considering **simple** a valid type for the printer, specify either an explicit value (such as the printer type) in the *content-type-list*, or an empty list. If you do want **simple** included along with other types, you must include **simple** in the *content-type-list*.

Except for **simple**, each *content-type* name is freely determined by the administrator. If the printer type is specified by the **−T** option, then the printer type is implicitly considered to be also a valid content type.

−i *interface*
Establish a new interface program for *printer*. *interface* is the pathname of the new program. (The **−e** and **−m** options may not be specified with this option.)

−l Indicate that the device associated with *printer* is a login terminal. The LP scheduler (**lpsched**) disables all login terminals automatically each time it is started. (The **−h** option may not be specified with this option.)

−M −f *form-name* [**−a** [**−o filebreak**]] [**−t** *tray-number*]]
Mount the form *form-name* on *printer*. Print requests that need the pre-printed form *form-name* will be printed on *printer*. If more than one printer has the form mounted and the user has specified **any** (with the **−d** option of the **lp** command) as the printer destination, then the print request will be printed on the one printer that also meets the other needs of the request.

The page length and width, and character and line pitches needed by the form are compared with those allowed for the printer, by checking the capabilities in the **terminfo** database for the type of printer. If the form requires attributes that are not available with the printer, the administrator is warned but the mount is accepted. If the form lists a print wheel as mandatory, but the print wheel mounted on the printer is different, the administrator is also warned but the mount is accepted.

If the −**a** option is given, an alignment pattern is printed, preceded by the same initialization of the physical printer that precedes a normal print request, with one exception: no banner page is printed. Printing is assumed to start at the top of the first page of the form. After the pattern is printed, the administrator can adjust the mounted form in the printer and press return for another alignment pattern (no initialization this time), and can continue printing as many alignment patterns as desired. The administrator can quit the printing of alignment patterns by typing **q**.

If the −**o filebreak** option is given, a formfeed is inserted between each copy of the alignment pattern. By default, the alignment pattern is assumed to correctly fill a form, so no formfeed is added.

If the −**t** *tray-number* option is specified, printer tray *tray-number* will used.

A form is ''unmounted'' either by mounting a new form in its place or by using the −**f none** option. By default, a new printer has no form mounted.

Note the other use of −**f** without the −**M** option above.

−**M** −**S** *print-wheel*

Mount the *print-wheel* on *printer*. Print requests that need the *print-wheel* will be printed on *printer*. If more than one printer has *print-wheel* mounted and the user has specified **any** (with the −**d** option of the **lp** command) as the printer destination, then the print request will be printed on the one printer that also meets the other needs of the request.

If the *print-wheel* is not listed as acceptable for the printer, the administrator is warned but the mount is accepted. If the printer does not take print wheels, the command is rejected.

A print wheel is ''unmounted'' either by mounting a new print wheel in its place or by using the option −**S none**. By default, a new printer has no print wheel mounted.

Note the other uses of the −**S** option without the −**M** option described below.

−**m** *model*

Select *model* interface program, provided with the LP print service, for the printer. (Options −**e** and −**i** may not be specified with this option.)

−**o** *option*

Each −**o** *option* in the list below is the default given to an interface program if the option is not taken from a preprinted form description or is not explicitly given by the user submitting a request (see **lp**(1)). The only −**o** *options* that can have defaults defined are as follows:

length=*scaled-decimal-number*
width=*scaled-decimal-number*
cpi=*scaled-decimal-number*
lpi=*scaled-decimal-number*
stty=*'stty-option-list'*

The term *scaled-decimal-number* refers to a non-negative number used to indicate a unit of size. The type of unit is shown by a ''trailing'' letter attached to the number. Three types of scaled decimal numbers can be used with the LP print service: numbers that show sizes in centimeters (marked with a trailing **c**); numbers that show sizes in inches (marked with a trailing **i**); and numbers that show sizes in units appropriate to use (without a trailing letter), that is, lines, characters, lines per inch, or characters per inch.

The first four default option values must agree with the capabilities of the type of physical printer, as defined in the **terminfo** database for the printer type. If they do not, the command is rejected.

The *stty-option-list* is not checked for allowed values, but is passed directly to the **stty** program by the standard interface program. Any error messages produced by **stty** when a request is processed (by the standard interface program) are mailed to the user submitting the request.

For each *option* not specified, the defaults for the following attributes are defined in the **terminfo** entry for the specified printer type.

length
width
cpi
lpi

The default for **stty** is

```
stty='9600 cs8 −cstopb −parenb ixon
    −ixany opost −olcuc onlcr −ocrnl −onocr
    −onlret −ofill nl0 cr0 tab0 bs0 vt0 ff0'
```

You can set any of the −**o** options to the default values (which vary for different types of printers), by typing them without assigned values, as follows:

length=
width=
cpi=
lpi=
stty=

−**o nobanner**
Allow a user to submit a print request specifying that no banner page be printed.

−**o banner**
Force a banner page to be printed with every print request, even when a user asks for no banner page. This is the default; you must specify −**o nobanner** if you want to allow users to be able to specify −**o nobanner** with the **lp** command.

−**P** *paper-name*
Specifiy a paper type list that the printer supports.

−**r** *class*
Remove *printer* from the specified *class*. If *printer* is the last member of *class*, then *class* will be removed.

−**S** *list*
Allow either the print wheels or aliases for character sets named in *list* to be used on the printer.

If the printer is a type that takes print wheels, then *list* is a comma or space separated list of print wheel names. (Enclose the list with quotes if it contains blank spaces.) These will be the only print wheels considered mountable on the printer. (You can always force a different print wheel to be mounted.) Until the option is used to specify a list, no print wheels will be considered mountable on the printer, and print requests that ask for a particular print wheel with this printer will be rejected.

If the printer is a type that has selectable character sets, then *list* is a comma or blank separated list of character set name ''mappings'' or aliases. (Enclose the list with quotes if it contains blank spaces.) Each ''mapping'' is of the form

known-name=*alias*

The *known-name* is a character set number preceded by **cs** (such as **cs3** for character set three) or a character set name from the **terminfo** database entry **csnm**. See **terminfo**(4). If this option is not used to specify a list, only the names already known from the **terminfo** database or numbers with a prefix of **cs** will be acceptable for the printer.

If *list* is the word **none**, any existing print wheel lists or character set aliases will be removed.

Note the other uses of the −**S** with the −**M** option described above.

The −**T** option must be invoked first with **lpadmin** to identify the printer type before the −**S** option can be used.

−**s** *system-name*[!*printer-name*]

Make a remote printer (one that must be accessed through another system) accessible to users on your system. *system-name* is the name of the remote system on which the remote printer is located; it must be listed in the systems table (**/etc/lp/Systems**). *printer-name* is the name used on the remote system for that printer. For example, if you want to access $printer_1$ on $system_1$ and you want it called $printer_2$ on your system:

−**p** $printer_2$ −**s** $system_1$!$printer_1$

−**T** *printer-type-list*

Identify the printer as being of one or more *printer-type*s. Each *printer-type* is used to extract data from the **terminfo** database; this information is used to initialize the printer before printing each user's request. Some filters may also use a *printer-type* to convert content for the printer. If this option is not used, the default *printer-type* will be **unknown**; no information will be extracted from **terminfo** so each user request will be printed without first initializing the printer. Also, this option must be used if the following are to work: −**o cpi**, −**o lpi**, −**o width**, and −**o length** options of the **lpadmin** and **lp** commands, and the −**S** and −**f** options of the **lpadmin** command.

If the *printer-type-list* contains more than one type, then the *content-type-list* of the −**I** option must either be specified as **simple**, as empty (−**I ""**), or not specified at all.

−**t** *number-of-trays*

Specify the number of trays when creating the printer.

−**u allow:***login-ID-list*

−**u deny:***login-ID-list*

Allow or deny the users in *login-ID-list* access to the printer. By default all users are allowed on a new printer. The *login-ID-list* argument may include any or all of the following constructs:

login-ID	a user on any system
*system-name***!***login-ID*	a user on system *system-name*
*system-name***!all**	all users on system *system-name*
all!*login-ID*	a user on all systems
all	all users on all systems

For each printer, the LP print service keeps two lists of users: an ''allow-list'' of people allowed to use the printer, and a ''deny-list'' of people denied access to the printer. With the −**u allow** option, the users listed are added to the allow-list and removed from the deny-list. With the −**u deny** option, the users listed are added to the deny-list and removed from the allow-list.

If the allow-list is not empty, only the users in the list may use the printer, regardless of the contents of the deny-list. If the allow-list is empty, but the deny-list is not, the users in the deny-list may not use the printer. All users can be denied access to the printer by specifying −**u deny:all**. All users may use the printer by specifying −**u allow:all**.

−**U** *dial-info*
The −**U** option allows your print service to access a remote printer. (It does not enable your print service to access a remote printer service.) Specifically, −**U** assigns the ''dialing'' information *dial-info* to the printer. *dial-info* is used with the **dial** routine to call the printer. Any network connection supported by the Basic Networking Utilities will work. *dial-info* can be either a phone number for a modem connection, or a system name for other kinds of connections. Or, if −**U direct** is given, no dialing will take place, because the name **direct** is reserved for a printer that is directly connected. If a system name is given, it is used to search for connection details from the file **/etc/uucp/Systems** or related files. The Basic Networking Utilities are required to support this option. By default, −**U direct** is assumed.

−**v** *device*
Associate a *device* with *printer*. *device* is the path name of a file that is writable by **lp**. Note that the same *device* can be associated with more than one printer.

Removing a Printer Destination

The −**x** *dest* option removes the destination *dest* (a printer or a class), from the LP print service. If *dest* is a printer and is the only member of a class, then the class will be deleted, too. If *dest* is **all**, all printers and classes are removed. No other *options* are allowed with −**x**.

Setting/Changing the System Default Destination

The −**d** [*dest*] option makes *dest* (an existing printer or class) the new system default destination. If *dest* is not supplied, then there is no system default destination. No other *options* are allowed with −**d**.

Setting an Alert for a Print Wheel

−**S** *print-wheel* −**A** *alert-type* [−**W** *minutes*] [−**Q** *requests*]
The −**S** *print-wheel* option is used with the −**A** *alert-type* option to define an alert to mount the print wheel when there are jobs queued for it. If this command is not used to arrange alerting for a print wheel, no alert will be sent for the print wheel. Note the other use of −**A**, with the −**p** option, above.

The *alert-types* are:

mail Send the alert message using the **mail** command to the administrator.

write Write the message, using the **write** command, to the terminal on which the administrator is logged in. If the administrator is logged in on several terminals, one is arbitrarily chosen.

quiet Do not send messages for the current condition. An administrator can use this option to temporarily stop receiving further messages about a known problem. Once the *print-wheel* has been mounted and subsequently unmounted, messages will again be sent when the number of print requests reaches the threshold specified by the −**Q** option.

none Do not send messages until the −**A** option is given again with a different *alert-type* (other than **quiet**).

shell-command

Run the *shell-command* each time the alert needs to be sent. The shell command should expect the message in standard input. If there are blanks embedded in the command, enclose the command in quotes. Note that the **mail** and **write** values for this option are equivalent to the values **mail** *user-name* and **write** *user-name* respectively, where *user-name* is the current name for the administrator. This will be the login name of the person submitting this command unless he or she has used the **su** command to change to another user ID. If the **su** command has been used to change the user ID, then the *user-name* for the new ID is used.

list Display the type of the alert for the print wheel on standard output. No change is made to the alert.

The message sent appears as follows:

> **The print wheel** *print-wheel* **needs to be mounted**
> **on the printer(s):**
> *printer* **(**$integer_1$ **requests)**
> $integer_2$ **print requests await this print wheel.**

The printers listed are those that the administrator had earlier specified were candidates for this print wheel. The number $integer_1$ listed next to each printer is the number of requests eligible for the printer. The number $integer_2$ shown after the printer list is the total number of requests awaiting the print wheel. It will be less than the sum of the other numbers if some requests can be handled by more than one printer.

If the *print-wheel* is **all**, the alerting defined in this command applies to all print wheels already defined to have an alert.

If the −**W** option is not given, the default procedure is that only one message will be sent per need to mount the print wheel. Not specifying the −**W** option is equivalent to specifying −**W once** or −**W 0**. If *minutes* is a number greater than zero, an alert will be sent at intervals specified by *minutes*.

If the −**Q** option is also given, the alert will be sent when a certain number (specified by the argument *requests*) of print requests that need the print wheel are waiting. If the −**Q** option is not given, or *requests* is 1 or **any** (which are both the default), a message is sent as soon as anyone submits a print request for the print wheel when it is not mounted.

FILES

/var/spool/lp/∗
/etc/lp
/etc/lp/alerts/printer fault handler for **lpadmin**.

SEE ALSO

enable(1), **lp**(1), **lpstat**(1), **stty**(1), **accept**(1M), **lpsched**(1M), **lpsystem**(1M), **dial**(3N), **terminfo**(4)

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