

NAME

rlpr - remote off-line print

SYNOPSIS

```
rlpr [-Hprinthead] [-Pprinter] [-Xproxyhost] [-#copies] [-Cclass]
[-Jjob] [-Ttitle] [-Uuser] [-i[indent]] [-wwidth]
[-1234cdfghlmnopqrstvNV] [--debug] [--port=port] [--hostname=hostname]
[--send-data-first] [--timeout=seconds] [--tmpdir=dir] [--verbose]
[--windows] [file ...]
```

DESCRIPTION

rlpr uses TCP/IP to send print jobs to lpd servers anywhere on a network. Unlike **lpr**, it does not require that the remote printers be explicitly known to the local system (traditionally through `/etc/printcap`), and thus is considerably more flexible and requires less administration.

rlpr can be used anywhere a traditional **lpr** might be used, and is backwards compatible with traditional BSD **lpr**. If **rlpr** is invoked as **lpr**, it preserves all known **lpr** semantics.

rlpr can be installed and used in two different ways: (the same guidelines apply for [rlpq\(1\)](#) and [rlprm\(1\)](#))

1. Ideally, if the **rlpr** client can be installed setuid root, then **rlpr** can interact directly with other **lpd**'s on the network. See **EXAMPLES** below.

2. If **rlpr** cannot be installed setuid root (in cases where one is not the administrator on the machine one needs to print from) then **rlpr** can be used in conjunction with an **rlprd** proxy agent. See **CONFIGURING A PROXY** and **EXAMPLES** below for details.

MOTIVATION

Traditional Berkeley **lpr** has one major drawback: the mortal user cannot **lpr** to a printer which is not listed explicitly in the `/etc/printcap` file.

This is especially annoying in scenarios where there is a central UNIX server which many users (using their own desktop computers) connect to in order to do their daily work; If those users wish to print files from the central server to their personal machines (assuming they had a local **lpd**), they cannot do this without the central server's `/etc/printcap` being edited to contain the host and printer of each user on the network - this scales horribly.

OPTIONS

Environment/Setup

--debug

Print gobs of debugging information.

-N, --no-bind

Don't try to bind to privileged port before connecting to lpd. Please see **CONFIGURING A PROXY** below for information on use of this option.

--port=number

Select an alternate port (instead of 7290) to connect to, if using **rlprd**. Usually not needed.

-H, --printhost=host

Select the host to print to (used with -P).

Instead of using -H, one can specify the hostname directly including it with the printer name with the printer@hostname syntax.

-P, --printer=printername, --queue=printername

Select the printer to print to (used with -H).

-X, --proxyhost=proxyhost

Select the proxy host to use, if necessary.

--timeout=seconds

Set the inactivity timer. If the connection hangs for more than **seconds** seconds, then **rlpr** will give up. Use the special value ``-1'` to wait forever. Default timeout is 3 seconds.

--tmpdir=tmpdir

Use tmpdir for temporary files (by default, /tmp is used)

-V, --version

Print version and exit.

NOTE: instead of specifying the printer, printhost, or proxy variables on the commandline, one can set up defaults through either environment variables or **rlprrc** configuration files. For information on personal or system-wide **rlprrc** files, see [rlprrc\(5\)](#).

Behavior

-#, --copies=copies

Print copies copies of each document - use sparingly, **printers aren't copiers**.

-m, --mail

Send mail upon completion.

-q, --quiet, --silent

Quiet mode - stay quiet (except for fatal errors).

-r, --remove

Remove file after printing.

-s

Ignored (provided for compatibility).

--send-data-first

Send the "data" transaction before the "control" transaction. Should never be required when **rlpr** is used in conjunction with a RFC 1179 conformant **lpd**. However, buggy implementations exist which require these semantics. Use only when necessary.

--verbose

Verbose mode - on by default unless **rlpr** is invoked as **lpr**.

--windows

"Windows" mode - for printing multiple files to a windows-based **lpd**.

Document Content

-1 Print data using [troff\(1\)](#) R (times roman) font.

-2 Print data using [troff\(1\)](#) I (times italic) font.

- 3 Print data using [troff\(1\)](#) B (times bold) font.
- 4 Print data using [troff\(1\)](#) S (special) font.
- c Assume data has been produced by [cifplot\(1\)](#).
- d Assume data has been produced by [tex\(1\)](#).
- f Filter data assuming the start of each line has a [fortran](#) carriage control character.
- g Assume data has been produced by the BSD plot library.
- l Treat control characters as regular characters.
- n Assume data has been produced by [ditroff](#).
- o Assume data is [postscript](#).
- p Print data using [pr\(1\)](#).
- t Assume data has been produced by [troff\(1\)](#).
- v Assume the data contains a raster image.

Document Format

- i, --indent=[cols]
Indent output by [cols](#) columns (8 by default).
- h, --no-burst
Do not print burst (banner) page.
- w, --width=width
Use [width](#) for page width when using [pr\(1\)](#).
- C, --class=class
Use [class](#) for the class name on burst page instead of the local system name.
- J, --job=jobname
Use [jobname](#) for the job name on burst page instead of the first filename in the job.
- T, --title=title
Use [title](#) for the title when using [pr\(1\)](#) instead of the current filename.
- U, --user=username
Use [username](#) for the user name on burst page instead of the actual username.
- hostname=hostname
Use [hostname](#) for the hostname on the burst page instead of the local system name.

OS-Specific Extensions

See **OS-SPECIFIC EXTENSIONS** below for details on these options.

- ext=os --extension=os
Interpret the arguments passed to [--extargs](#) as if on operating system [os](#). Currently, [os](#) must be either [hpux](#) or [none](#).
- extargs="args"
Change behavior according to OS-specific arguments listed in [args](#).

CONFIGURING A PROXY

In situations where the **rlpr** client cannot be installed setuid root, **rlpr** often cannot directly talk to an **lpd** because most **lpd**'s require that requests come from privileged ports. Unfortunately, **rlpr** cannot "come from a privileged port" without having superuser status. **The privileged port requirement is part of RFC 1179.**

That said, some **lpd**'s, most notably some of the ones which have shipped with **Windows NT**, **Solaris**, and **NCRunix**, do not require requests to come from a privileged port. Before going through the work of configuring a proxy, you should make sure one is required for your situation. You can check by trying to run **rlpr**: if it is successful in spooling the job, you do not need to install **rlpr** setuid root. You should then pass the **-N** (or the more verbose **--no-bind**) to **rlpr** in the future to suppress **rlpr**'s warning messages.

If your situation does not require a privileged port, do not use one. You can explicitly request a regular port, even when **rlpr** has been installed setuid root, by using the **--no-bind** option. This is a good idea because there are only 11 privileged ports that the RFC allows. This ends up having the practical implication of limiting your print requests to about 11 per every 3 minutes, which is often unacceptable.

The rest of this section assumes that **rlpr** cannot be installed setuid root in your situation, and that a remote **lpd** requires **rlpr** connect to it from a privileged port. It requires that you or someone you know has root access to another machine the network, so that you can use a **proxy**, known as **rlprd**, to get around the problem.

rlprd works by taking **lpd** requests on a non-privileged port, mapping them to a privileged port, and sending them out to the real **lpd**. The proxy and the **lpd** **need not be on the same machine**.

In the scenario provided in the motivation, if each user had root access on his own machine, it would be optimal for the user to start **rlprd** up on his own machine, in which case the proxy and the printhost are the same machine. The user would additionally have to make sure his own machine was listed in his local [/etc/hosts.lpd](#) so that his **lpd** would accept connections from his **rlprd**.

However, if the machine the user wants to print to is not running unix (but is running an **lpd**) (i.e. Windows, WinNT, etc) -- Then that user can configure his **lpd** to accept connections from an **rlprd** running somewhere on the network, and use that **rlprd** as a proxy for **rlpr**.

For more on this mess, see [rlprd\(8\)](#).

EXAMPLES

WITHOUT A PROXY (rlpr is setuid root)

```
sun% rlpr --printer=hp4l@foo.bar.org foo.c
```

prints **foo.c** to the printer **hp4l** on the host **foo.bar.org** (assuming **foo.bar.org** has been configured to accept print requests from host **sun** in its [/etc/hosts.lpd](#)).

```
sun% who | rlpr --printer=hp4l@foo.bar.org
```

prints the output of [who\(1\)](#) to the printer **hp4l** on the host **foo.bar.org**.

WITH A PROXY (rlpr is a normal program)

```
sun% rlpr -Xfoo.bar.org --printer=hp4l@foo.bar.org foo.c
```

prints **foo.c** to the printer **hp4l** on the host **foo.bar.org** using **foo.bar.org** as a proxyhost. Under this configuration, **foo.bar.org** needs to be configured to accept print requests from the proxy (itself) and **not from sun**. In situations where the proxy and the printhost are not

the same machine, this can lead to some security holes due to the original lameness of berkeley **lpd**'s host-based security.

NOTE: if a proxyhost isn't specified anywhere, **rlpr** assumes one isn't necessary.

OS-SPECIFIC EXTENSIONS

Some vendors have added features to their BSD-based **lpr** products, which are upwardly compatible with **lpr** but incompatible with one another. To support these extensions, **rlpr** allows the user to indicate what operating system to emulate and provide a string of OS-specific options, either through commandline arguments or environment variables.

Note that for correct operation, these extensions should be only used when interoperating with an **lpd** provided by the vendor for the indicated operating system.

ENVIRONMENT VARIABLES

The following environment variables are used by **rlpr**:

RLPR_EXTENSION

Specifies the operating system to interpret OS-specific arguments relative to.

RLPR_EXTARGS

Specifies the OS-specific arguments.

RLPR_PRINTHOST

Specifies the default host to print to.

PRINTER or **LPDEST**

Specifies a default printer (printqueue) to use. First **PRINTER** is consulted, then **LPDEST**.

Note that one can also specify the host to print to by setting printer to be printer@hostname. This may be more convenient than setting **RLPR_PRINTHOST**, but will confuse the traditional BSD print commands.

RLPR_PROXYHOST

Specifies a proxy host to use, if necessary.

RLPR_CONFDIR

If **RLPR_CONFDIR** is set, it is the directory containing the system-wide **rlprrc** file. By default, /etc is used.

TMPDIR

If **TMPDIR** is set, it is used for temporary files. By default, /tmp is used.

FILES

<u>~/rlprrc</u>	Personal printer/host database
<u>\$TMPDIR/cf*</u>	Temporary control files on local machine
<u>\$TMPDIR/df*</u>	Temporary data file for jobs from stdin
<u>/var/spool/*/*cf*</u>	Temporary control files on printhost
<u>/var/spool/*/*df*</u>	Temporary data files on printhost
<u>/etc/hosts.lpd</u>	Host-based security on printhost
<u>/etc/passwd</u>	Personal identification
<u>/etc/rlprrc</u>	System-wide printer/host database (by default)

SEE ALSO

[rlpq](#)(1), [rlprm](#)(1), [rlprd](#)(8), [rlprrc](#)(5), [lpr](#)(1)

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BUGS / LIMITATIONS

Some evil applications have **lpr** hardcoded into them.