

# An Overview of Printing for UNIX

This document contains the following sections:

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For information related to this topic refer to:

- [Cluster Printing pages \(http://www.cmu.edu/computing/clusters/printing/index.html\)](http://www.cmu.edu/computing/clusters/printing/index.html)

**CONVENTIONS:** Throughout these pages, commands that must be typed are shown in bold at a unix prompt (%). You should type everything after the prompt, but not the prompt character (%).

**For more information** about any of the commands described in this document, use the "man" command.

For example:

% **man lpr**

% **man lpq**

% **man lprm**

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## Printable File Types

The following file types can be sent to the printers.

- **ASCII**  
That is, plain text files. If you can read the file by typing "more filename" at the prompt, then it will probably print without problems.
- **Postscript**  
Postscript is a "display language" used to describe how a page looks to the printer. It's the standard output language for most newer unix applications that print graphics (like Netscape).

## Converting Files to Postscript

If your file is not in ASCII or postscript format, you'll need to convert it to postscript. Below, are the commands used to convert some common file formats (e.g., PDF, man, DVI, text) to postscript.

- **PDF** (Adobe's Portable Document Format)  
% **pdf2ps input.pdf myfile.ps**
- **man** (the file format used for manual pages)  
% **groff -Tps filename > myfile.ps**
- **DVI** (used by the TeX formatting system)  
% **dvips myfile.dvi**  
(automatically produces myfile.ps)
- **text** (enscript)  
Why would you want to convert text? With enscript, you can print multiple columns per page, and you can add page numbers and other header information. These options are both useful for source code or large documents.  
% **enscript -pmyfile.ps myfile.txt**

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## Choosing a Printer

Expert users may refer to the `/etc/printcap` file on any Andrew Unix machine to find a printer.

## Selecting a Default Printer

### For One Session

Use the following command to select a default printer that will be used for one session or "login". (That is, from now until the time you log out. )

To use the central print queue, type  
`% setenv PRINTER andrew@printing.andrew.cmu.edu`

### Permanent Default Printer

To permanently print to the same printer (in this example, the central print queue).

1. Use your preferred text editor to open the **.login** file in your home directory.  
**Note:** If you're not sure which text editor to use, use "pico" by typing **pico .login**.
2. Find the line that reads **Put your additions here before the windowing environment startup**.
3. Immediately following this line, type  
**setenv PRINTER andrew@printing.andrew.cmu.edu**
4. Save your changes to the `.login` file.  
**Note:** If you elected to use pico, press **Ctrl-x** to save and exit.
5. Log out and back in.

## Accessing a printer other than the default

There may be times that you need to access a printer other than your default printer (e.g., to check the queue or remove a print job). To do this, simply add `-Pprintername` to the print command that you are executing. Please refer to the "Name of Printer or Print Queue" column of the [Windows Printer Chart](http://www.cmu.edu/computing/clusters/printing/winchart.pdf) (<http://www.cmu.edu/computing/clusters/printing/winchart.pdf>) [PDF] for a list of cluster and library printer names.

**Note:** The print commands shown below (i.e., `lpr`, `lpq` and `lprm`) are all described in the following sections.

For example:

```
% lpr -Pcl-baker@printing.andrew.cmu.edu myfile.ps
% lpq -Pcl-baker@printing.andrew.cmu.edu
% lprm -Pcl-baker@printing.andrew.cmu.edu -
```

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## The LPR Print Command

To print, use the **lpr** command followed by the name of the text or postscript file that you want to print.

For example, to print the *myjob.ps* postscript file to your default printer type,  
**% lpr myjob.ps**

Like most unix applications, lpr can accept files from pipes and redirects. The following commands will also work:

**% lpr < myjob.ps**

**% echo myjob.ps | lpr**

## Printing to a printer other than the default

### Andrew Printers

To print to a printer other than your default printer, you can add the *-Pprintername* command to the lpr command.

For example, to print the *myjob.ps* postscript file to the printer Baker cluster printer, you would type:

**% lpr -Ppcl-baker@printing.andrew.cmu.edu myjob.ps**

### Stand alone printers

If you'd like to print to a stand alone printer (perhaps in a department), you can specify the hostname of the printer by using *lpq -P@hostname*.

For example, to print the *myjob.ps* postscript file to the *hostname* printer, you would type:

**% lpr -P@hostname.andrew.cmu.edu myjob.ps**

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## Managing Your Print Jobs

### Viewing the Print Queue

To view a list of the jobs in the print queue, use the **lpq** command. As with **lpr**, you can use **-Pprintername** to specify a printer other than your default.

For example, to view print queue information for the central print queue, you would type:

```
% lpq -Pandrew@printing.andrew.cmu.edu
```

The output might look something like this:

```

% lpq -Pandrew@printing.andrew.cmu.edu
printing.andrew.cmu.edu...
                Pharos LPD Server
                -----
                Printer: andrew (Paused)

Owner           Status      Job Name           Job No Pages   Size Priority
-----
jws2            Waiting    library homepag    188      0 189798      1
pomonavaler    Waiting    pdf mac test pr    120      0  59483      1
henning         Waiting    Gambling: Pharo    143      0 2034704     1
henning         Waiting    Gambling2: Phar    145      0 2034705     1
henning         Waiting    Railroads: Phar    176      0 1170865     1
henning         Waiting    Review: Pharos     181      0 393590      1
pomonavaler    Waiting    Printing Guidel    209      0 598481      1
% █

```

### Remove a Specific Job from the Print Queue

Before removing a specific print job, you must use the **lpq** command to get the job number of the job to be removed (in the "Job" column). As usual, you can use **-Pprintername** to specify a printer other than the default.

Using the example image from the previous section, to remove job number 120, use the **lprm** command. Because deleting jobs is dangerous, **lprm** requires the printername with the **-Pprintername** option.

For example, to remove job number 120 from the central print queue, you would type:

```
% lprm -Pandrew@printing.andrew.cmu.edu 120
```

### Remove All of your Jobs from One Print Queue

If you want to remove all of your jobs from one printer queue, use a dash instead of the job number. Again, you are required to specify the printer name using the **-Pprintername** command.

For example, to remove all of your print jobs from the Baker cluster printer, you would type:

**% `lprm -Pcl-baker@printing.andrew.cmu.edu` -**

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