10.4.5 Print Management Commands

Click one of the buttons to take you to that part of the video.

Print Management Commands 0:00-0:20

As you know, you can use the CUPS web-based administration utility to manage the CUPS service running on a Linux system. However, you can also use a variety of different command line tools to manage CUPS as well. In this lesson we're going to review what these command line tools are.

Send Print Jobs 0:21-2:06

Let's begin by discussing how you can send a print job to a CUPS printer directly from the command line. This is done using the lp command at the command line.

The lp command can send a particular file to your CUPS printer. The syntax for doing this is shown here: we run 'lp -d' followed by the printer that you want to send the print job to, and then the name of the file that you want to print.

An example is shown here, where we send a file named projectschedule.txt to a printer named HPLJ5, using the lp command.

Notice that when we do this, the print job is created and it's assigned an ID number; in this case, it's HPLJ5-2. The print job is added to the print queue and then sent directly to the printer.

The lp utility can use some other options besides the -d option that we just looked at, which is used to create print jobs. We can also the -n option with the command to specify how many copies of the print job we want to print.

We can use the -m option to specify that lp send a confirmation email message to the user that sent the print job when the print job is finished printing. You can use the dash -q option followed by a number to set the priority of the print job. You can use the dash -o landscape option to specify that the file be printed in landscape format instead of portrait format.

And if your printer supports duplex printing, you can use the dash -o sides=2 option to specify that we print on both sides of the paper.

View Printer Information 2:07-3:14

In addition to the lp command, you can also use another utility called lpstat at the command line. The lpstat utility is used to display CUPS printer information.

And probably one of the most useful options you can use the lpstat is -t. This will cause lpstat to display all information about all CUPS printers on the system.

An example shown here: I ran lpstat, and we see that I have just one printer configured on the system; its name is HPLJ5. And you can see that it's connected with a parallel port connection. We can also see how long it's been up. It tells us it's been accepting requests since this certain date and time.

We also see what its status is. We see that it's currently idle, meaning that it's not actually processing any print jobs. And we also see that it is online and waiting-- it's available to take print jobs.

In addition, if this printer were not idle but was actively processing print jobs, a list of all the pending print jobs in the queue would also be listed in the output of the lpstat command.

Cancel Print Jobs 3:15-3:54

If you have a print job pending-- a print job is in the print queue-- and you realize that you do not want that job to actually print, you can use the cancel command to kill that print job. In order to do this, you first have to have the print job's Job ID number. And you could use the lpstat command to find out what that Job ID number is.

Once you know it, you just enter cancel. And in this case, we're canceling the HPLJ5-4 print job. When I do, it kills the job. It stops it from printing and removes the print job file from the print queue.

Set the Default Printer 3:55-5:11

If I have more than one CUPS printer defined, then I can use the lpoptions command to specify which printer is going to be the default printer for my system. And this is done using the -d option, followed by the name of the printer that you want be the default printer.

For example, if I want to set the HPLJ5 printer as my default printer, I would enter 'lpoptions -d HPLJ5'. This will set the default printer for all users on the same system. But be aware that individual users can actually override this default printer setting.

To do this, they create a hidden file in their /home directory named .lpoptions. Remember that the dot at the beginning of a filename indicates that this is a hidden file. And then within that file, they add this directive, default space and then the name of the printer that they want to be their default printer.

For example, let's say I had two printers connected to the system. One is HPLJ5 and the other is HPLJ2. By creating this file in my /home directory and putting this text in there, then my default printer will always be HPLJ2, no matter what the system administrator entered with the lpoptions command.

View Printer Settings 5:12-5:22

In addition, you can also use the lpoptions command to view your printer's configuration settings. To do this, you use the -l option with the lpoptions command.

Manage the Print Queue 5:23-7:06

In addition to the lpoptions command, there are other commands that you can use to either enable or disable a printer's print queue. You can use the cupsaccept command to enable a print queue, and you can use the cupsreject command to disable a print queue.

In this example, I use the 'cupsreject HPLJ5' command to disable the HPLJ5 printer's print queue. And if we look at the output of the lpstat command beneath it, we see that HPLJ5 is not accepting requests. And it tells us when, basically, the cupsreject command was run; it tells us it's rejecting jobs.

Understand that if we use the cupsreject command, the printer itself will continue processing all queued print jobs-- whatever happened to be in the queue at the time we ran the cupsreject command. Even though it will continue processing any queued print jobs, the cupsd daemon will not allow any new jobs to enter the queue.

If we want to work on the printer and we use the cupsreject command, we'll have to wait for all the pending jobs to finish before we can take it offline. If you wanted to, you could use the -hold parameter with the cupsreject command. This will tell the printer to stop printing after the current job is complete, instead of going through every single job in the print queue.

When I'm done working on the printer, I can reenable it by entering 'cupsaccept', followed by the name of the printer at the shell prompt, and it will start processing the queue again. Basically, cupsaccept and cupsreject enable or disable the print queue itself, but not the printer.

Manage the Printer 7:07-8:22

We can accomplish this same task from a different perspective, using different commands. For example, if we wanted to disable the printer itself but not the print queue, we would use a different command. We use the cupsdisable command instead of the cupsreject command.

The syntax is the same. We enter cupsdisable, followed by the name of the printer. An example of that is shown right here. We enter 'cupsdisable HPLJ5'.

When I run this command, the print queue itself associated with the HPLJ5 printer will continue to accept new jobs, but none of them will actually be sent to the physical printer. They'll just be queued up, waiting for you to do whatever it is you need to do.

You can see this in the output of the lpstat command. Notice down here it tells us the status of the printer is paused. It's the print queue itself that is still accepting requests, but the printer is disabled.

None of the jobs being sent to the print queue will actually be printed until you reenable the printer, using the cupsenable command. You enter cupsenable, followed by the name of the printer. And you typically use the --release option with the cupsenable command to release all pending jobs in the queue to be printed.

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lpd Commands 8:23-9:33

You can also use line printer daemon commands to manage print jobs on the system. These are called lpd commands--line printer daemon.

By far, CUPS is the preferred printing system for modern Linux distributions. However, many, many years ago, the preferred printing system was the line printer daemon, lpd. Most of the lpd commands have a functionality that is similar to that offered by a CUPS command.

The key thing to remember is that most of these lpd commands still work with the cupsd daemon, even though they were designed to work with the lpd daemon.

For example, to send a file to the printer, you use this command here: lpr -P, followed by the name of the printer, followed by the name of the file that you want to print.

You can query the status of the printer using the lpc status command. You can view a list of pending print jobs in the print queue by entering the lpq command. And you can delete a pending job from the print queue using the lprm command, followed by the job number of the print job that you want to get rid of.

Summary 9:34-9:39

That's it for this lesson. In this lesson, we reviewed the various command line utilities that you can use on a Linux system to manage printers, print jobs, and print queues.
