

Linux Academy: Printer Management – Course Notes

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Video One – LPD and LPR

- legacy printing subsystem (lpd), “line printing daemon”
- uses configuration file /etc/printcap
 - options contained include the printer URL (smb://, file://, lp#://, etc) along with print driver options
- was replaced by CUPS as printer definitions/drivers became more complex (and manufacturers required more proprietary control over non-standard protocols unlike dot matrix or PCL printers)
- lpd/lpr: submits files for printing at the command line, to the default or other indicated printer
 - -P: printer destination (common name)
 - -U: username in case the printer requires user information for options
 - -m: send email to indicated address when print is complete
 - -q: hold the job
 - -r: remove the print job after successful printing
- spool directory
 - /var/spool/lpd or /var/spool/cups
- lpr can be used at the command line despite the fact that it has been replaced by CUPS, maintains complete compatibility

Video Two – CUPS

- modern printing subsystem, replacing lpd as printer drivers became more proprietary, less standard and more complex
- command line utilities maintain command and execution compatibility with lpr
- predominately GUI, all GUI interfaces interact with the default CUPS server which can be accessed with a browser at port 631
 - <http://localhost:631> – will bring up documentation page, add /admin to bring up admin interface
- adding a printer
 - allows the designation as generic or point to a provided printer PPD definition file or chose from a list of provided common drivers
 - install hplip package in Debian or RPM distributions for more HP printers
 - allows options to be set (page size, header page, etc)
 - allows a common name to be set and referred to at command line and within applications
 - add/change any printer to default system printer
- manage and view/change/delete/move print jobs, for the system or by user depending on privileges
- configuration file
 - /etc/cups/cupsd.conf
 - can be edited in browser GUI console
- spool directory
 - /var/spool/cups
 - file names correspond to job numbers that can be listed in admin GUI

Video Three – Queue Management

- primary method for managing print queues is to use the CUPS admin GUI interface
- jobs are listed by printer and by user
 - previous jobs can be repeated
 - printers can be paused/disabled or set to reject jobs altogether
- command line utilities for queue management (legacy)
 - lpr (see video one)
 - lpq: show printer queue status
 - -P: destination printer to show status of, default behavior is to show status of default printer
 - -a: print information on jobs for all printers
 - -l: print information on one or more printer jobs in more verbose mode

- lpstat: prints printer status information
 - -a: shows whether indicated (or default) printer is accepting jobs
 - -d: displays the current default printer destination
 - -l: shows a verbose/long listing for printers, classes or jobs (as indicated)
 - -p: shows the printers and indicates if they are enabled for printing
 - -s: shows status summary for all (or default) printers (equivalent to -d -c and -v options)
 - -v: shows the printers and the devices they are attached to
- lprm: removes the indicated job from the print queue
 - -P: destination printer
 - ID: the ID of the print job in the queue to remove (can be seen in GUI or by issuing lpq for a list of current jobs)
- cupsenable/cupsdisable: start/stop printers
 - -c: cancel all jobs on named destination
 - --hold: hold remaining jobs on named destination
 - --release: releases jobs on named destination for printing
- cupsaccept/reject: accept or reject jobs
 - -r: allows you to indicate a reason for rejecting jobs
 - must indicate a printer name as part of the command or will disable all printers

Video Four – Troubleshooting

- most easily managed troubleshooting can be accomplished through the admin GUI
- lpq – current status of default printer or all printers
 - first step to determine if jobs are being processed by any or all of the printers
 - lpr -P printername testfile.txt
 - check the output to see if that print job has been created
 - look at /var/spool/cups and see if the job # at the command line when submitted exists
- cupsenable: enable the printer for accepting/processing jobs
 - look at the output of the printer to see if it has happened
- cupsdisable: disable the printer for maintenance, does NOT reject jobs, will queue them up for later
 - cupsenable when complete
- lpq will indicate QUEUE status, but lpstatus will indicate PRINTER status