CUPS Printers vs PM printers

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Traditional OS/2 Printing

- Print job sent from PM application as GPI (Graphics Programming Interface) data to PM printer driver (LASERJET, PSCRIPT, PSPRINT, OMNI, etc.)
- PM driver converts GPI data to printer-specific language (PCL, PostScript, etc.) and sends converted data to print queue (managed by Spooler)
- Spooler services queue and passes data to printer port (USB, LPT, COM, SMB, etc.)

CUPS Printing - PostScript Printer

- CUPS-aware application sends PostScript or PDF data to selected CUPS queue (selected printer)
- CUPS passes it through one of its own generic filters (pdftops or pstops) to produce finished PostScript data
- CUPS passes this finished PostScript to the printer via configured port

CUPS Printing - Non-PostScript Printer

- CUPS-aware application sends PostScript data to selected CUPS queue (selected printer)
- CUPS passes it through the printer's filter to convert the data to printer-specific language or through one of its own internal filters (e.g., pdftoraster) to produce finished data
- CUPS then passes finished (converted) data to the printer via configured port

CUPS vs PM Printer Objects

- CUPS-aware applications allow selection of CUPS printer queue directly, not PM printer object
- PM applications allow selection of PM printer object, not CUPS queue

CUPS Print Queues vs PM Spooler

- A CUPS print queue is named for the printer it services
- The CUPS daemon (cupsd.exe) manages CUPS queues (among other things)
- Each PM printer object has a requisite print queue for jobs sent to that printer
- When active, the Spooler manages PM print queues

Creating PM Printer Objects for CUPS Queues

- A PM printer object must use either a printer contained in a driver pack or have its PPD imported (via PIN)
- The object must have an output port of type CUPS, and the output port properties must list the CUPS server (usually localhost) and the CUPS queue for the printer

Printing to CUPS from PM Application

- Select PM printer object
- GPI data sent from application to PM printer driver
- PM printer driver sends data to CUPS queue as output port
- CUPS handles processing of data to convert to printer-specific language
- CUPS then passes converted data to the printer via configured port

Where to look for lost print jobs

- PM Spooler - if CUPS daemon has stalled, job may be stuck in PM print queue; if job is present and waiting, check CUPS daemon status
- CUPS job list - if printer is not accepting data or is disconnected, job will be waiting or rejected; check CUPS error log if printer is online

Selecting a New Printer for ArcaOS

- Check:
  https://wiki.linuxfoundation.org/openprinting/database/databaseintro

- Look up the model printer you are considering and see how well it is supported by CUPS
- Check the PSPRINT driver pack (go through the motions of installing a new PM printer object, and see whether the printer model is listed)
- Download the PPD (see URL, above) and import it
- Some printers require specific filters (drivers)